INVESTIGATING THE EFFECT OF STUDENT RESPONSE SYSTEM SUPPORTED THINK-PAIR-SHARE PEDAGOGY ON PREPARATORY SCHOOL EFL STUDENTS' VOCABULARY ACHIEVEMENT

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ABSTRACT

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The educational potentials of using mobile technologies in higher education classrooms where English acts as a lingua franca among all nations are growing. The needs have emerged to understand and integrate educational technologies into these classrooms. The purpose of this study was to investigate the effect of Student Response System (SRS) supported Think-Pair-Share pedagogy on vocabulary achievement of EFL students in a private university in Turkey. 154 students and 7 instructors were selected from 4 intermediate and 4 upper intermediate classrooms according to convenience sampling. For this mixed-methods research, the data were collected through vocabulary achievement tests, the perception survey, and semi-structured interviews conducted with students and instructors. Quantitative data analysis was performed with independent samples test using the Mann-Whitney *U* test and qualitative data were decoded following grounded theory. The analysis of the vocabulary achievement test revealed that SRS supported Think-Pair-Share pedagogy resulted in higher vocabulary achievement. The analysis of interviews with students

and instructors revealed that SRS experience increased engagement and concentration of students on in-class activities, provided better quality feedback for both instructors and students, fostered self-confidence and resulted in an increased sense of cooperation and competition among students. Both instructors and students reported that using SRS was a positive experience for both parties. Findings in this study add to deepening SRS literature and present practice-oriented recommendations for classroom teachers. This study presents recommendations for future research on SRS supported vocabulary development, vocabulary retention, and to prep school and undergraduate program curriculum designers in ELT, pre-service and in-service teacher education programs.

Keywords: Student Response System, technology integration, ELT, EFL, prep school

ÖZ

ÖĞRENCİ YANIT SİSTEMİ DESTEKLİ DÜŞÜN-EŞLEŞ-PAYLAŞ PEDAGOJİK MODELİNİN ÜNİVERSİTE HAZIRLIK SINIFI ÖĞRENCİLERİNİN KELİME ÖĞRENİMİ ÜZERİNDEKİ ETKİSİ

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Mobil teknolojilerin İngilizcenin ortak dil olarak kullanıldığı yükseköğrenim sınıflarındaki eğitsel potansiyelleri artmaktadır. Bu çalışmada Türkiye'de özel bir üniversitede, Öğrenci Yanıt Sisteminin (ÖYS) yabancı dil sınıfındaki öğrencilerin kelime öğrenmelerine bir etkisi olup olmadığı incelenmiştir. Çalışma kapsamında, uygun örnekleme yöntemiyle belirlenmiş, 4 orta seviye ve 4 ileri-orta seviye sınıfından 154 öğrenci ve 7 İngilizce okutmanıyla birlikte çalışılmıştır. Karma yöntemle yürütülen bu çalışmada veriler; kelime testi, algı testi ve öğrenciler ve okutmanlarla yapılan yarı-yapılandırılmış görüşmeler üzerinden toplanmıştır. Nicel verilerin analizinde bağımsız gruplar testlerinden Mann-Whitney *U* testi kullanılmıştır; nitel veri ise temellendirilmiş teori uygulanarak incelenmiştir. ÖYS destekli Düşün-Eşleş-Paylaş tekniği uygulanan sınıflarda, kelime testi sonuçlarının daha başarılı olduğu ortaya çıkmıştır. Öğrenci ve öğretmenlerle yapılan görüşmelerde, ÖYS kullanımının, sınıf içi aktivitelere katılım ve konsantrasyonu arttırdığı, hem öğretmenlere hem de öğrencilere daha iyi geribildirim sağladığı, özgüveni yükselttiği ve öğrencilerde

ortaklaşa çalışma ve mücadele etme hissiyatını geliştirdiği bulunmuştur. Hem öğrenciler hem de öğretmenler ÖYS kullanımını olumlu bir tecrübe olarak değerlendirmişlerdir. Çalışma bulguları, gelişen ve derinleşen ÖYS literatürüne katkıda bulunmakta ve öğretmenlere sınıflarında kullanabilecekleri pedagojik öneriler sunmaktadır. Bu çalışma, ÖYS destekli kelime öğrenimi ve öğrenilenlerin akılda kalıcılığını çalışan araştırmacılara, üniversite hazırlık ve lisans düzeyinde İngilizce dil sınıflarındaki müfredat geliştiricilere, hizmet öncesi ve hizmet içi program tasarımcılarına öneriler sunmaktadır.

Anahtar Kelimeler: Öğrenci Yanıt Sistemi, teknoloji entegrasyonu, İngilizce dil öğretimi, hazırlık sınıfı

To My Dear-Beloved Family Who Have Already Deserved To Be Immortal,

To Immortality,

To Missed Opportunities,

To People To Be Met, Jokes To Be Laughed At, Things To Be Experienced and Dreams To Be Realized,

To Smart and Good People,

&

To Whom It May Concern

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INTRODUCTION

1.1. Background of the Study

Starting at the turn of the 21st century, technological advancements gained acceleration and became an integral part of our daily lives. Particularly, the introduction of web 2.0 technologies, and increased availability of tablets, smart phones and applications that address any user needs, unprecedentedly changed the way people live. Today, students prefer digital technologies and interactivity more than ever. And the fact that it is now easier to access the Internet and technological tools leads scholars in the field of education to put more effort into the integration of technology into teaching (Wang, 2014).

Today, the world is digitalizing at a tremendous speed. People are already dependent on different technologies in many aspects of their daily lives. Especially, due to the practicality they offer, in the fast-moving world, mobile technologies assist people more than any other technologies. The most common forms of this technology are tablets and cellular phones for the time being. The United Nations Telecommunication agency (2009) report that 4.6 billion people were then mobile phone subscribers, indicating that 67 percent of all the people in the world were affected from the rapid and widespread rise of mobile phones. Today, when these figures are compared with the facts from the ICT report (2015), it is revealed that, by the end of 2015, it is expected that the number of cellular phone subscribers will not be fewer than 7 billion, which indicates that in 5 years, around 2.5 million more cellular phones will be added to the service of humanity. This is also significant in that for the first time in human history, the number of these devices have surpassed the number of people in the world. Currently, according to www.gsmaintelligence.com, there are over 7,5 billion mobile connections while the whole world population is reported by www.census.gov/popclock/ as being no more than 7,2 billion indeed. After all, all these numbers and trends show that such devices are abundantly used and need to be

integrated into different aspects of humanity other than daily usage. In that sense, education, particularly the field of ELT, has a growing significance as learning and speaking English is getting more and more significant in the globalizing world and by nature, a language classroom has always been the best setting to make use of educational technologies.

Technology in ELT classrooms has a particular significance mainly because it promotes interactivity, allows using different types of media, and motivates learners. Technology is "…enabling learners to access learning materials in places, and in formats, that were previously impossible" (Hockly, 2014, p. 81). That is to say, technology is the medium that removes the barrier of time and place for learning. Even more importantly, technology is believed to foster meaningful learning to what De Haan (2005) and Jonaessen (2007) refer as the learning which results in knowledge being transferred to other contexts and remaining applicable, unlike rote learning. This is particularly significant within the context of English as a Foreign Language (EFL), which provides limited opportunities to use the language outside the classroom, by nature. This view is supported by Agbatogun (2012) who claims that a language is best learnt especially on condition that students are given a chance to interact with each other and find themselves in situations where they can apply the target structures. Therefore, technology has a critical potential to offer in that sense in order to make learning more interactive, meaningful and authentic.

Of the many emerging technologies, the Student Response System (SRS) can be considered as one of the most promising educational tools (Moeller and Reitzes, 2011). The system consists of 3 main components. First of all, there needs to be a main device which can be a PC, laptop, tablet or any another mobile device which can run the app or website properly; secondly, mobile devices for students to submit their answers are needed and thirdly, a monitor or a screen which shows the responses of the students immediately is needed. SRSs allow teachers to pose a question and require students to respond to it. In return, students, using their hand-held devices or clickers, send their answers to the teacher. The computer records and shows the distribution of students' responses on screen depending on the preference of the instructor. Teachers are able to make "on the fly" changes in their instructions in the rest of the class time based on students answers.

Early use of the SRS dates back to as early as the 1970s. However, due to the aforementioned potential benefits, it has been gaining popularity recently and becoming commonplace along with its recently created forms of applications thanks to the web 2.0 revolution. During this transition, SRS has transformed from physically "cold" one-buttoned wired clickers to wireless mobile applications with user-friendly interfaces that are compatible with various brands and Operating Systems. Socrative, www.socrative.com, is one of these "modernized" versions of the SRS to be used in this study. Among all the available options, Socrative was chosen and used for this study due to several reasons. First of all, the researcher himself had a prior first-hand experience with Socrative; that is, he knew the affordances and limitations of this very tool. Secondly, it was completely free. Thirdly, it was compatible with various OSs including Windows and Mac OS and it supported different browsers such as Mozilla Firefox, Google Chrome, Safari, and Internet Explorer. Moreover, not only could it run on web browsers, but also free apps both for the teacher and students were available in Google Play Store and Apple Store. In addition, unlike some other SRS tools, Socrative enabled users to see the question/prompt in their devices, a feature that was helpful in this study. Also, it allowed teachers import/export quizzes they created for themselves through automatically generated unique numbers. This was another feature used in this study. In short, because of several practical advantages and previous experience with it, Socrative was chosen for this study as SRS tool.

In the EFL context, learners do not have direct access to English outside the classroom (Xiaoqiong & Xianxing, 2011) and thus the classroom remains the only place to be used for that purpose and needs to be best made use of. Therefore, SRS is a way to bring a substantial engaging effect into classroom assists teachers and learners to do so. Arguably, this is mainly due to the fact that it is a piece of technology todays' learners bring into the classroom in order for practicing what they are taught and therefore, this provides a higher sense of responsibility to learners. (Alexander, Crescini, Juskewitch, Lachman & Pavlina, 2009). According to Berry (2009), SRS provides immediate feedback, promote learning from peers and encourage the sharing of experiences, and these correspond with how adults learn. Besides, Beatty (2004) suggests that SRS is useful because it provides technological support for student-active, question-driven, discussion-centered pedagogy and, also, it is an effective tool for collecting immediate feedback for both students and the instructor, which becomes

very important for pacing the lesson from teachers' points of view. Another significant role of SRS is that it serves as encouraging for the reluctant and timid students by keeping their names anonymous (Moredich & Moore, 2007).

1.2. Purpose of the Study

The purpose of this study was to investigate the effect of SRS use on vocabulary achievement of EFL students. The study was conducted in the context of 4 intermediate and 4 upper intermediate level prep classes at a private university in Turkey in Spring 2015. Participants were 154 students and 7 instructors. Specifically, the present study aimed to investigate if using SRS supported think-pair-share pedagogy results in higher vocabulary achievement among university preparatory class EFL students and what university preparatory class EFL students' and instructors' attitudes are towards SRS supported think-pair-share pedagogy in vocabulary learning.

1.3. Significance of the Study

EFL classes all around the world, as a matter of course, suffer from a lack of opportunity for exposure to the target language. Because of this, it is vital for learners to be able to access materials and tools maximizing the effectiveness of in-class instruction. Additionally, the lack of equal participation of students due to teacher-centered teaching is a problem as opposed to what constructivism suggests. Chen and Chung argue that developing modern learning tools that support effective English learning is a critical issue in English-language education (as cited in Taki & Khazaei, 2011). Using technology allows the teachers to address multiple learning types and differentiate the delivery. Also, mobile technologies carry a potential to help students achieve more especially in language classrooms where interaction and engagement plays a vital role. This study contributed to the growing body of literature of SRS and, also, at the end of the study, implementations were reflected on to offer practical pedagogies to be used in today's classrooms. It addressed several gaps to be filled by the future research.

Initially, though the SRS technology has been mainly preferred for science, management and psychology courses at undergraduate levels which allow up to several hundred students in a class, a relatively less explored field, language education,

also possesses great potential due to its inherent characteristics like encouraging interactivity and use of technology, mainly owing to its motivating factors. There are several studies in language classes; however, some have been conducted with adults, to whom Prensky (2001) refer as digital immigrants whose technological familiarity is supposedly different from that of digital natives or K-12 level students, again, whose needs and motivations are different. Yet; there has been no study conducted with EFL prep classes on vocabulary achievement. This study is important and significant in that in EFL prep classes, students are gathered from various departments and English is supposed to act as "lingua franca" among them, even though they have different levels of motivation, career aspirations or personality types, unlike a typical undergraduate or graduate EFL classroom, where learners are expected to use English as a primary source of learning some content; in other words, the language acts and is used as a means to achieve mastery over some content. Thus, it is important to emphasize here that in such a setting, it will be easier to focus on the effect of technology on language learning towards which all the students are at the same proximity. Thus, both age-related issues and the heterogeneity of the group members make this study different from any other one.

Also, newly emerging and recent technologies offer most people who have access to these technologies validated ways which offer invaluable experience to make learning independent of time and space. Now that people all over the world own and use these devices, there is a considerable amount of focus on researching and validating the outcomes of the inquiries how mobile technologies can be integrated into learning in different levels and fields, which is usually referred to as m-learning. There have been many studies conducted so far claiming that mobile technologies have great potential to boost learning (Chinnery, 2006; Naismith, Lonsdale, Vavoula, & Sharples, 2004; Roschelle, Sharples, & Chan, 2005; Thornton & Houser, 2005). However, Cardoso (2011) and Mork (2014) report that even though SRS carries a great potential for increasing student motivation and participation, fostering self-assessment and interaction and contributing to learning, there is surprisingly a scarcity of literature revealing their effectiveness. What he points out in his study is that considering what it can offer especially to language classrooms, it is surprising to witness such a rare use of SRS in this situation. In short, despite its obvious potential, SRS studies are far

from comprehensive in language classrooms and there is a lack of literature that has empirically examined the linguistic, attitudinal or content-based outcomes of its uses.

Additionally, from the literature review carried out on the use of SRS with preparatory school EFL students, it was found that, even though SRS has been experimented with larger groups of undergraduate students resulting in positive perception, there is not any empirical study on the implications of SRS for EFL classrooms in small group settings. Particularly, SRS use in vocabulary learning is an under-studied topic. The majority of literature in relation to the use of the SRS in educational settings focuses on the attitude of students at undergraduate level with huge numbers in different fields such as management, physics, chemistry and psychology but not language learning (Arnesen, Sivertsen Korpås, Hennissen, & Birger Stav, 2013; Auras, Bali, & Bix, 2010; Chan, Brown, Bun Chung, Hui-Jing, & Luk, 2013; Heaslip, Danovan, & Cullen, 2014; Latham & Hill, 2014).

In vocabulary activities in a typical EFL class, students whose self-confidence and linguistic competency is relatively higher usually tend to participate in the activities more frequently when the teacher is randomly nominating students. This may result in shy or weaker students tend to be even more and more passive over time. Therefore, SRS allows every student to contribute to the activity equally and get individual feedback on his performance while in a traditional vocabulary checking exercise, the teacher nominates certain students who are volunteers or sure of their answers failing to respond to the confusions or misunderstandings of other learners. Although this is still some feedback for the teacher, according to Hedgcock and Rouwenhorst (2014), this feedback can be more comprehensive thanks to SRS giving every student a chance to respond to the question asked by the teacher in an effort to provide individualized instruction. More importantly, to a certain extent, this opportunity can transform a student exhibiting passivity, shyness or low-confidence into one who takes more responsibility and is more active in the learning process using a specific technology; that is to say, student response systems.

In spite of all the advancements in technology, there are certain pedagogical implementations that traditional teaching methods have failed to respond. Unlike collaborative classrooms, in a traditional classroom setting, where learners are usually sitting in rows of twos or sometimes threes, teachers insist on relying on teacher-centered pedagogies, usually ignoring the results of research focusing on benefits of

collaborative learning. Teachers posing as the ultimate source of information, the activities begin and end with the teacher and throughout the activities, unsurprisingly, the teacher is always at the center so as to check students' comprehension. When all these come together, and given the fact that technology is given little role in many teaching contexts in spite of its enormous potential, students feel less motivated and active while teachers place themselves more at the center and as a result, learning takes place less and less. Shaver (2010) claims that in order to foster student motivation, confidence and enthusiasm and thus performance, engaging them in the instructional process plays a key role. When SRS is used with an appropriate pedagogy helps shifting such teacher-centered pedagogies to more collaborative ones and achieving this which is critical especially in language classrooms. It is important to underline the fact that SRS does not come with a collaborative pedagogy means that it is the teacher who has the full responsibility to adapt the pedagogy and implement it in a collaborative pedagogy. Given these circumstances, it is not wrong to claim that SRS can serve to any means teachers with a constructivist approach apply in classroom to foster students' learning (Klein, 2009). It is important to emphasize here that although studies conducted to date have so far mainly focused on SRS use in science courses, language classrooms carry arguably greater potential for SRS since interaction is naturally a key element in learning and using a language communicatively. As Mayer et al. (2009) and Petersohn (2008) assert, it is not the media that causes learning; instead, it is the way it is integrated into teaching and implemented. This view is later supported by Hockly (2014) who acknowledges that it is "… the choice of not just hardware and software but the teaching and learning approach and the instructional design of materials must be aligned to the reality of the … educational contexts. Clearly there is no single technology that 'works best'…" (p. 83). Therefore, in spite of mixed findings in previous studies, the pedagogical implications underlying implementations are still a mystery and any study related to language classrooms has a greater potential for designing the learning environments of the future.

1.4. Definitions of Terms

In this study, there are terms that need to be defined clearly:

- **EFL**: stands for English as a Foreign Language, which refers to study of English in countries where it is not a medium of communication.

- **Prep School:** University preparatory schools; in Turkey, depending on departments and universities and their policies, students are required to reach a certain proficiency level in English to follow academia in their own domains. For this purpose, many students are taught English for a year with the purpose of becoming proficient enough before they start their undergraduate education. So preparatory schools are pre-requisite for undergraduate education in which students study English until reaching expected proficiency level.
- **Socrative:** an alternative student response system application which is designed to empower engagement in classrooms. It can be accessed via a web browser and is compatible with multiple OSs such as Windows, Android and IOS.
- **SRS**: a wireless system developed to encourage interactivity between the presenter and the audience. Questions are projected through a monitor, mostly through PowerPoint and the audience is asked to respond. Live time results are collected and screened, which allows the presenter to provide instant feedback in case it is needed.
- **Think-Pair-Share:** the collaborative pedagogy developed by Frank Lyman (1981). It consists of three stages. Initially, students individually think; secondly, pairs share and reflect on their individual ideas in various ways and; thirdly, pairs share their mutually agreed responses with other pairs using boards, orally or via different tools.

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this chapter is to provide an overview of existing literature on SRS from various aspects. In that sense, first a discussion on technology integration in ELT is presented. Then, SRS integration is discussed. Lastly, Think-Pair-Share, the pedagogy used in this study was discussed and a summary of the recent literature was provided.

2.1. Technology Integration in English Language Teaching

Early studies regarding technology in ELT started to appear in the academia more than 30 years ago. While in the early days of computerized technologies the term Computer Assisted Language Learning (CALL) was used only to refer to computerized instructions, now, with the introduction and widespread use of mobile devices more than ever, this term is interchangeably used with mobile assisted language learning or even other types of technological tools in ELT (Motteram, 2013). Even though trends have been changing in the field of ELT, the main aim of the researchers has always been to integrate the technology meaningfully in the language learning process (Motteram and Sharma, 2009). Moreover, Li and Ni (2011) state that in the new age, it is a must for language teachers to be computer literate in order to be able to develop digital materials and meaningfully integrate technology into learning. Relatedly, recent studies take technology into consideration when developing new frameworks for the learning settings suitable to the 21st century. For instance, Mishra and Koehler (2006) developed the TPACK (Technological pedagogical content knowledge) framework adding onto the previously developed Shulman's (1986) PCK (Pedagogical Content knowledge).

After all, technology has a great potential to offer in education, particularly in English Language Teaching as language learning needs more social interaction among learners and it also helps a lot in widening students' access to the target culture.

Researchers are putting a great deal of effort into maximizing the use of technology in language learning. For instance, Keengwe and Kang (2012) point out that using technology in EFL/ESL classrooms enhances students' language skills, motivation, participation and collaboration. Accordingly, Shyamlee and Phil (2012) list several advantages of technology focusing on language teaching:

1) Cultivating student interest in study thanks to powerful multimedia,
2) Promoting communication capacity,
3) Widening students' insights of the target culture,
4) Teaching going beyond time and space,
5) Creating collaborative atmosphere among students
6) Easy communication between students and the teachers.

According to Yang and Chen (2007), using computers in a language classroom has lots of advantages such as facilitating communication, reducing anxiety, encouraging oral discussion, developing the writing/thinking connection, nurturing social or cooperative learning, promoting egalitarian class structures, enhancing student motivation, facilitating cross-cultural awareness, and improving writing skills. Lyman-Hager, Davis, Burnett, and Chennault (1993) claimed that using multimedia could have a positive impact on vocabulary learning of EFL students.

In the rapidly-mobilizing world, more efforts have been put on understanding the effectiveness of mobile tools based on the previous findings of computer technologies. In recent years with the advent of mobile technologies, a new research trend has occurred among researchers. Kukulska-Hulme and Shields (2008) refer to this as in Mobile Assisted Language Learning (MALL or m-learning), people use their personal portable devices that enable them to continue their learning across different contexts. There have been quite a number of applications used on mobile phones or tablet computers as well as laptops in the field. Lu (2008) lists a compilation of studies which found that m-learning has a huge potential for language learners. Troussas, Virvou and Alepis (2014) state that mobile tools offer reasonable opportunities for collaborative pedagogies. These tools are useful particularly in language learning. There are several studies in the relevant literature revealing the positive effects of mobile devices on vocabulary learning (Stockwell, 2010). Of all the tools being

investigated, SRS is one technology that is becoming increasingly popular among educators and researchers (Mork, 2014). There are many overviews on what SRS is and what it offers to educators (Gok, 2011), but still there is a need to research its implementation and its results in terms of learning outcomes in language classrooms.

2.2. The Integration of SRS

SRS refers to handheld devices designed to allow students to actively participate in the activities that involve their answer being displayed as live results in front of the classroom. In the literature, they are labeled with various names including: audience-paced feedback systems (APF), audience response system (ARS), classroom performance system (CPS), electronic response system (ERS), hyper-active teaching technology (H-ITT), interactive engage engagement (IE), interactive audience response systems (IRIS), interactive learning systems (ILS), interactive student response systems (ISRS), personal response systems (PRS), peer response system (PRS), group response system (GRS), wireless response system (WRS), personal response system (PRS), and classroom response system (CRS) (Auras & Bix, 2007; Lowery, 2005).

Prensky (2001) claims that today's learners are different and technology has a great importance in their lives. Therefore, it is important for today's educators to be able to respond to this need and SRS can have a role in this. By providing immediate feedback, promoting learning from peers, and encouraging the sharing of experiences, clickers support not only adult learning styles as Berry (2009) expresses, but also they can shift any learning context placing learners to the center from more teacher centered to a more collaborative one. Therefore, SRS can assist a teacher who wants to create more interaction during his or her class and checks students' learning continuously and provide constant feedback during this process.

The extended SRS literature revealed that using SRS has several positive outcomes on learners. Firstly, SRS activities show a positive impact on student achievement and performance (Conoley, Moore, Croom, & Flowers, 2006; Fies, 2005). Another significant finding coming from SRS studies is the fact that it increases the participation and engagement of students using SRS as a part of in-class activities (Arnesen, Sivertsen Korpås, Hennissen, & Birger Stav, 2013; Fies, 2005; Montplaisir, 2003). Additionally, SRS assisted instruction lead students to think more deeply about

the course content according to Montplaisir (2003). Besides, in Bergtrom (2006)'s study, SRS is found to result in when implemented in classes where a constructivist approach is implemented:

1) Higher participation,
2) More lively engagement,
3) Increased opportunities for both student – student and teacher – student interaction,
4) Improved attendance
5) Provision of instant feedback on students' retention to both student and the teacher.

Arnesen, Sivertsen Korpas, Hennisen, and Birger Stav (2013) reveal that especially starting a lesson with SRS fosters engagement and maintains high participation not only during SRS periods, but throughout the whole class time. Another valuable finding coming out of their study is that students whose performance belongs to lower half benefitted more from SRS according to the interviews conducted in their study. In the SRS literature, there are a good number of studies suggesting that SRS use certainly results in higher student participation, engagement and therefore learning. Accordingly, in the study conducted by Latham and Hill (2014), 75% of 156 students taking Organizational Behavior class in the business school of a mid-Atlantic university respond to the survey that they had a positive or very positive attitude towards future use of SRS. Another striking finding in the study is that SRS is favorable among students as they do not have to reveal their identity and therefore do not fear making mistakes in front of "others", which responds to the study by Kaiser and Wisniewski (2012) which finds that using SRS mostly helps successful learners and their study suggests focusing on effectiveness of SRS on lower-performing students forming small groups. Siau, Sheng, and Nah (2006) also state research mostly focuses on involvement, engagement and participation. Heaslip, Danovan, and Cullen (2014) add that enjoyment, engagement and fun were successfully achieved thanks to SRS in their study.

Relevant literature also revealed some pitfalls related to SRS use. Lyubartseva (2013) concludes in her study that in order to really make use of SRS, students should

be informed that teachers are using them not to control their behavior, but to help them learn more. In addition, Keough (2012) claims the growing body of literature does not really respond to the effectiveness of SRS in the field of education. Similarly, Nielsen, Helsen, and Stav (2012) emphasize that relying on technology using it just for the sake of doing so rather hinders potential achievement and researchers have failed to address the issue. Draper (2002) supports this claim stating that using SRS just for the sake of using it has a negative effect on the learners. Gray and Steer (2012) also find results in terms of SRS's effectiveness on students' achievement are at variance with what the literature mostly suggests. Another problem reported by Reay, Li and Bao (2008) is that if not well-managed, SRS can cause ineffective use of valuable time allocated for in-class instruction. Besides, Draper (2002) reports that teachers' having a negative attitude towards SRS also is likely to affect their use of it, their expectations and implementation; in other words, this negative attitude of teachers hinders the potential of the tool. Another design-related problem stated in Barnett's (2006) study is that the way questions are created and administered also might be an issue. It was elaborated in the study that irrelevant questions can limit the usability of SRS. Finally, Cardoso (2011) claims SRS technology is rarely used in language classrooms despite their inarguable potential benefits, and there is a serious lack of literature about this issue, resulting in lack of depth in both perception and result oriented findings.

Previous studies concluded that, mainly because of the natural passivity large classrooms bring, SRS has been mainly preferred by professors lecturing to large audiences. Even though there were studies concluding how positively it is perceived by both instructors and students, and positive results in students' scores due to SRS use, this study specifically examined if all these scientifically proven advantages of SRS apply to EFL classes consisting of relatively fewer numbers of students.

2.3. Think-Pair-Share Pedagogy

A foreign language is best learned through interaction and if student are given opportunity to apply the target structures as Agbatogun (2012) claims. This falls under the scope of constructivism. Wells claims social constructivism suggests that knowledge emerges as it is "constructed and reconstructed between participants in specific situated activities, using the cultural artifacts at their disposal, as they work towards the collaborative achievement of a goal" (as cited in Yüksel, 2009). There are

numerous models developed that apply constructivist principles in implementation. One of them is cooperative learning discussed by Long and Porter (1985). As opposed to Mazur's (1997) peer instruction model, the top recommended and most widely-accepted model to be used with SRS, of all the available pedagogies that have been put forward previously, Frank Lyman's (1981) Think-Pair-Share model has been selected for this study which was developed as a constructivist model for certain reasons. First and foremost, Think-Pair-Share pedagogy allows the learning to be less teacher centered by giving more interdependence to students for participating in the activities, which is what a communicative-approach driven language class, thus an environment where learning becomes more meaningful, empowers. Moreover, this technique offers "processing time" and gives students "wait-time", which greatly helps students to go beyond and deeper in their thinking and thus their answers similar to what Yerigan (2008) writes "The Think-Pair-Share is an active learning strategy that provides processing time for 10:2 theory, builds in wait time, provides rehearsal, enhances depth and breadth of thinking, increases level of participation, allows the instructor to check for understanding and provides time for instructor to make instructional decisions" (p.23). Its rationale has a lot in common with that of the constructivist approach as this model requires learners to interact with each other/others at different levels. Therefore, this model encourages learners to be more active during instruction.

The original Think-Pair-Share model fundamentally consists of 3 steps even though the model has been adapted to different teaching contexts and is open to technology integration. Concerning its variations, the limit is only the teacher's creativeness. According to the original model, these three phases are as follows:

2.3.1. Think

Firstly, the teacher initially posits a question to the class and gives students time to think individually and come up with original answers on their own. This is critical in that usually asking questions during teaching happens on an ad-hoc basis and several factors diminish these questions' effectiveness. One of the most common mistakes teachers make is not to give enough time to students after asking questions. In a typical language classroom, in such cases, stronger students become more willing to share their answers because of the fact that they need less time to process the information required to understand the question at different levels: vocabulary,

grammar, register etc., which makes weaker and more shy students hold themselves back and; therefore, result in becoming even less willing to share their responses, even though they know the correct answer. Therefore, by allowing students "thinking time" individually, this model can engage every student at an individual level. There is not a limitation in terms of timing; in other words, it is up to the teacher to decide how much "thinking time" will be allocated before moving on to the next step, which is "pair".

2.3.2. Pair

The second step requires students' pairing up preferably with the student sitting closest to them. At that point, depending on the type of the task and the question, students share their primary thoughts or answers with each other. In order to maximize the potential of this step, the best way might be to make students convince each other why they answered a question in the way they have done. Alternatively, students might be asked to play the role of devil's advocate. While discussing their answers together, students will have a second chance to reflect on their previous understanding of the concept and how they have made their reasoning. Furthermore, when a communicative approach is taken into consideration, this model meets its criteria as students have to listen to each other, ask questions, put their ideas into words and convey the meaning and summarize and paraphrase what their pairs said. All these features give students a chance to develop social skills in addition to important linguistic ones. Although there is not a prescribed time limit for this phase, it is supposed not to be less than that of the "think" stage because having discussions requires students apply more critical thinking in order to validate or change their initial answers based on the reasons or explanation they hear from their partners.

2.3.3. Share

In the third and final step, students, or now pairs, share what they agree on with the whole class. This can be done in the traditional way where the teacher elicits the answers from one or more couples. However, depending both on the subject and the question type, diagramming, drawings on papers, or even drawings on the board can be an alternative means to share the answers with the whole class. Using the responses the couples give, the teacher can gauge how much the topic is understood and whether there is any misunderstanding among students which requires an immediate further action before moving on, or the teacher may prefer to push students harder and

challenge their intelligence by asking higher-level questions now that everybody has put forward what he or she knows. After all, students are expected to feel much more comfortable and to be willing to share their answers as they have been given "thinking time" twice before, firstly after the question is posed and secondly before they take part in discussion with their partners. Furthermore, they are expected not only to be more at ease, but also to form more sophisticated and well-supported answers evidenced from the sources used in that class.

An analysis about the exiting literature of the model reveals that there are many studies outlining the effectiveness of the model on learning. It was also understood that the model is preferred not only by English language teachers; instead, it is studied and used by experts from other fields as well. Accordingly, Allen (2007) lists the advantages of the model as follows (p. 107):

1. It provides students with think time prior to discussion.
2. It allows for independent and collaborative learning.
3. It gives students opportunities to collaborate to refine definitions.
4. It invites more equal participation as all students share with one other and then with another pair of students.
5. It engages students in active learning.
6. It invites students to share their understanding in kinesthetic and visual modes.

The Think-Pair-Share model has been widely used in ELT mainly due to its collaborative nature and found in many studies to be effective in various ways. For instance, Utama, Marhaeni and Putra (2013) reports that this approach allows development of self-confidence and speaking skills among English language learners. They attribute this increase to the interaction and motivating effect this model brings. In another study, Jebur, Jasim and Jaboori (2012) finds that implementation of this model resulted in higher learning results in a General English class. Similarly Fitzgerald (2013) writes that using Think-Pair-Share led to higher achievement results. Roswati, Zaim, and Radjab (2014) find out that implementing Think-Pair-Share pedagogy enabled their students to become better speakers of the target language in addition to fostering their motivation. McKeachie and Svinicki (2006) state that following Think-Pair-Share activities, their students often feel more at ease to participate in a general discussion. Besides, Baleghizadeh (2010) finds in his study

that when his students in the second year of English Language and Literature programme worked with Think-Pair-Share pedagogy, their word-building abilities improved greatly. Likewise, the study by Sumarsih and Sanjaya (2013) reveal that applying Think-Pair-Share strategy improved the mean of students' scores in their writing class. In addition, Slone and Mitchell (2014) investigate the Think-Pair-Share approach with Google Drive integration and conclude their study, stating that discussions were useful for students and the flexibility of Google Drive provided meaningful guidance. They claim still there is much more space to be discovered with emerging technologies and the Think-Pair-Share pedagogy.

2.4. Summary of the Literature Review

The literature points out that technology has potential to address the issues in EFL classes. As long as SRS is used with a purpose in mind of the instructor and this is conveyed to the students, this technology contributes to both linguistic and social development of students in language classes. In order to maximize the potential of SRS, a collaborative pedagogy, Think-Pair-Share seems to be a good model due to several reasons. SRS supported Think-Pair-Share pedagogy seems promising for removing teacher-centered vocabulary teaching, and bringing more interactivity, deeper thinking and more collaboration to the language classes. Moreover, SRS does not help only to the learners by the data it provides, yet also instructors can benefit from the data it provides. Consequently, thanks to all these features SRS and Think-Pair-Share model provides, its implementation is likely to result in more learning if managed properly.

CHAPTER 3

METHODOLOGY

3.1. Research Design

This research was conducted in order to determine whether using SRS supported Think-Pair-Share results in higher vocabulary achievement on intermediate and upper intermediate level EFL students of a preparatory school at a private university in Ankara, Turkey. Additionally, students' and instructors' attitudes towards SRS experience were analyzed and reported. For this purpose, the mixed-methods design was used in this research. Fraenkel, Wallen, and Hyun (2012) explain that "mixed-methods research involves the use of both quantitative and qualitative methods in a single study." (p. 557). Johnson and Onwuegbuzi (2004) point out "a key feature of mixed methods research is its methodological pluralism or eclecticism, which frequently results in superior research" (p. 14). They elaborate on their discussion and say that "the goal of mixed methods research is not to replace either of ... approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies" (p. 14-15). Zachariadis, Scott, and Barrett (2013) claim that in social sciences, quantitative findings can be seen as problematic and unsatisfactory and needs further reevaluating. They go on to explain that qualitative findings enable the researcher to comment on the descriptive findings. Moreover, the mixed-method research has been gaining popularity recently in the field of social and behavioral sciences (Venkatesh, Brown, & Bala, 2013). Therefore, collecting both quantitative and qualitative data for this study enabled the researcher to come up with thoroughly validated findings.

3.2. Research Questions

The purpose of this study is to understand the effectiveness of SRS supported think-pair-share model in vocabulary learning in EFL classrooms. Accordingly, this study investigated the following questions:

- Does the use of SRS supported think-pair-share pedagogy result in higher vocabulary achievement among university preparatory class EFL students?
- What are the university preparatory class EFL students' and instructors' attitudes towards SRS supported think-pair-share pedagogy in vocabulary learning?

3.3. Context of the Study

3.3.1. The Setting

This study was conducted at a private university in Ankara, Turkey. The subject university was established in 2009 by an Act of Parliament and started admitting students and teaching in the 2012 – 2013 Fall semester as an English medium private university. It is one of only three Turkish universities in that university placement scores (YGS, LYS) are normally used to place students into their programs in other universities; yet, in these universities, students enroll in their faculties and study in the common core courses in their freshman year. Only at the end of the first year, do they make the choice for a related department to study.

Due to the fact that it is an English medium university, learning the foreign language has a crucial role in that university. The English Language School (ELS) is the responsible unit for teaching English at the university. Its mission is written as "to provide high quality language instruction, to help students improve their language awareness and knowledge." In order to pursue their undergraduate studies in their departments, students need language and academic skills as well as comprehension skills in order to be able to express themselves in written and oral communication. ELS, thus, aims to develop and foster all of these necessary skills of their students.

Under the directorate of the ELS, there are 2 different sections to organize the work flow. The Curriculum and Program Development Unit deals with the curricular issues and cooperates with the Testing and Assessment Unit to make the best implementation of the reconstructivist program claimed to be the rationale behind its curriculum. It runs on a modular system that is divided into 3 different levels according to CEFR (Common European Framework of Reference for Languages). Common reference levels range from A1 to C2; in other words, learners, according to their

proficiency levels, are labeled as basic, independent or proficient users. Accordingly, students' entry and exit levels are explained in this guideline in detail (Council of Europe, 2011).

In order to pass onto their departments in the University, students need to successfully complete a module and only then can they study the following one and, ultimately, take the proficiency exam (EPE) which tests vocabulary, listening, writing, grammar and reading skills on condition that they complete all previous modules successfully.

Because all the skills were tested in tests, students were instructed to develop reading, listening, grammar, vocabulary, speaking and writing skills. In short, instructors were supposed to give equal weight to the all skills' development.

The target population was private university preparatory school students aged between 17 and 20 who were taught according to the benchmarks established within the CEFR in Turkey. Nevertheless, there are socio-economic and institutional inequalities among higher education institutions in Turkey. Even though different universities follow the same standards in terms of learning objectives, the proficiency level they aim to reach at the end of the academic year may vary. In addition, different universities may focus on certain skills in terms of language use. For example, while some universities assess students' proficiency only through multiple choice grammar tests, some others focus on all 4 skills: reading, writing, listening and speaking. Therefore, students were expected to be proficient in all skills; so all the skills and sub-skills were critical to be able to successfully complete the preparatory year and start undergraduate education.

The single and only reason this study was conducted at that institution was due to the constraints of the researcher at his workplace. Since he was teaching full time at the same institution, planning, organizing and conducting the research was possible only at that institution.

3.3.2. Participants

The participants of the study were 154 students and 7 instructors at a private English medium university English Language School during 2014 – 2015 Spring semester. Students who participated in the study were studying at either intermediate or upper intermediate level (N = 154). The reason why only intermediate or upper

students were selected for the study was only that that semester, there were not enough number of beginner level classes in order to be used as control and experiment groups so that their scores would be compared. In other words, due to the fact that there was only one beginner level classroom at the time of the study, this group was not included within the study. Of all the participants in the experiment groups, 32 were males while 45 of them were females, which amounts to 41.5% for males and 58.5% for females for this group of participants. Participants were going to study at 4 different faculties on condition that they successfully complete their freshman courses offered by the Basic Sciences Unit.

For intermediate students (n = 34), 9 were registered at faculty of education, 12 at faculty of business, administrative and social sciences, 3 were at faculty of architecture and 10 were registered at faculty of engineering. On the other hand, for upper intermediate level (n = 43), there were 12, 14 and 17 registered students respectively at the faculty of education, business and engineering. There was no student studying at upper intermediate level from the faculty of architecture.

These students were registered at 2 different intermediate and upper intermediate classes. They were included in the study due to the fact that their instructors volunteered to participate in the study and it was not possible to create a new class with randomly selected students due to institutional limitations; that's why, convenience sampling was done. The details about the distribution of students according to the faculties they registered are presented in Table 3.1 below:

Table 3.1

Distribution of Students According to Faculties They Registered

	Gender		Faculty				
Level	Male	Female	Edu.	Social Sci.	Arch.	Engin.	Sum
Inter	14	20	9	12	3	10	34
Upper	18	25	10	14	0	19	43

There were 7 instructors selected among the volunteers to take part in the study. Initially all the instructors were invited to be a participant in the study via an e-mail. Later among the volunteers, first 7 instructors who acknowledged that they were willing to take part with their partners were accepted to the study. Partners had to take part in this study together because in experiment classes, students had to use SRS both in reading and listening classes which were taught by different instructors.

Four of these selected instructors were sharing 2 intermediate classes while three were responsible for 2 upper intermediate classes. Due to the time allocation on weekly program, a teacher was teaching Listening and Speaking book in a classroom and Reading and Writing in another classroom. While 4 of the teachers teaching in intermediate classes were responsible for only 2 experiment classes, 2 of the upper intermediate class teachers were sharing 2 other classes which were not included as an experiment group with different partners. Still, having partners sharing classes and volunteering to take part in the study was a very fortunate situation. Teaching experience of these instructors ranged from 2 to 19 years. They had spent at least one semester teaching at the institution before the study took place; therefore, they were familiar with each other, other colleagues, student profile and limitations within the existing system. Their degrees included Linguistics, English Language and Literature and English Language Teaching. One of the instructors was a Canadian native speaker of English and she did not have a Bachelor degree in teaching; instead, she had completed and earned a certificate for Teaching English as a Foreign Language. Two of 7 instructors were male and the rest of the group consisted of females, which made them the majority. Moreover, in order not to reveal the true identities of the instructors, they were given pseudonyms to be used in this study. For the demographic information about the instructors, see the table 3.2 below:

Table 3.2

Demographics about the Instructors

Pseudonym	Age	Gender	Bachelor Degree	Teaching Experience
Nalan	27	F	ELT	5 years
Şeyda	29	F	English Literature	7 years
Burak	41	M	English Literature	19 years
Esra	28	F	ELT	5 years
Kerim	29	M	Linguistics	7 years
Selen	27	F	English Literature	2 years
Rüya	31	F	Canadian Studies	4 years

3.3.3. Course Book

The main course book for all the levels was Pathways series published by National Geographic Learning. It had a skill-based syllabus, divided into vocabulary, reading, writing; additionally, critical thinking sections.

Table 3.3

The Details about the Course Books for Both Levels

	Level			
	Intermediate		Upper intermediate	
	PATHWAYS 2		PATHWAYS 3	
Unit number	Reading & Writing	Listening & Speaking	Reading & Writing	Listening & Speaking
1	Happiness	Staying Healthy in the Modern World	Social Relationships	Gender and Society
2	Big Ideas	Energy and Our Planet	Science and Detection	Reproducing Life

Table 3.3 (continued)

The Details about the Course Book for Both Levels

	Level			
	Intermediate		Upper intermediate	
	PATHWAYS 2		PATHWAYS 3	
Unit number	Reading & Writing	Listening & Speaking	Reading & Writing	Listening & Speaking
3	Connected Lives	Culture and Tradition	City Solutions	Human Migration
4	**Deep Trouble**	**A Thirsty World**	Danger Zones	Fascinating Planet
5	**Memory and Learning**	**Inside the Brain**	The Business of Tourism	Making a Living, Making a Difference
6	Dangerous Cures	What We Eat	Landscape and Imagination	A World of Words
7	Nature's Fury	Our Active Earth	**Global Appetites**	**After Oil**
8	Building Wonders	Ancient Peoples and Places	**Medical Innovators**	**Traditional and Modern Medicine**
9	**Form and Function**	**Species Survival**	World Languages	The Legacy of Ancient Civilizations
10	Mobile Revolution	Entrepreneurs and New Businesses	**Survival Instinct**	**Emotions and Personality**

Note: Units in bold were omitted.

In each book, there were 10 units to be covered in 15 weeks. Nevertheless, due to the allocated time for the spring semester, it was not possible to cover all the units available in the course book. Therefore, the units which did not meet the curricular objectives were omitted from the syllabus by the curriculum and program development unit. All the instructors were informed about these omissions through weekly plans and weekly meetings in the relevant weeks.

At intermediate level, in pathways 2, units *Deep Trouble – A Thirsty World*, *Memory and Learning – Inside the Brain*, *Form and Function – Species Survival* were taken out completely. In addition, the last units in both Reading & Writing and Listening & Speaking books, *Mobile Revolution – Entrepreneurs and New Businesses* could not be covered fully, so all these units were excluded from examinations. Omitted units were shown in bold in the Table 3.3.

Due to similar concerns, also at upper intermediate level, several units had to be taken out. In Reading & Writing book, the units *Global Appetites, Medical Innovators* and *Survival Instinct* were omitted while the units *After Oil, Traditional and Modern Medicine* and *Emotions and Personality* from the Listening and Speaking book were excluded from the semester plan and these omissions were shown in bold in the Table 3.3.

Because of these changes, intermediate level teachers used SRS while teaching units 7, 8 and 10, and upper intermediate teachers used it with units 6 and 9. Vocabulary test was created using the target vocabulary studied within those units.

3.4. The Integration of SRS with Think-Pair-Share Pedagogy

SRS can be incorporated into teaching in more than one way. Depending on the purpose, it can be used to check attendance, as a warm up, for diagnostic purposes to check students' prior knowledge on a topic, to collect immediate feedback on whether a concept has been understood, or as a means of formative or summative assessment in quiz format with true/false questions, multiple choice questions or open-ended answers. These varied alternatives for using SRS give instructors freedom and flexibility to adapt it in their teaching, according to learning objectives and the needs and level of their classes. In other words, there is not a single prescribed methodology for using SRS in teaching; on the contrary, there are various approaches that can be used by the instructors to maximize the effectiveness of SRS. Nevertheless, the

original model applies 3 steps. Initially, the teacher explains the activity to whole class and students start thinking individually. In the second stage, students pair up and share their individual opinions; if there is a disagreement, they try to convince the other student; if there is a mutual agreement, they go further and elaborate on their answer. That's why questions asked in such activities should challenge students' critical thinking skills. In the third and last stage, the teacher elicits responses from some pairs or all pairs through choosing among volunteers, randomly or one by one depending on the dynamics of the classroom or pairs discuss and share their answers with other pairs. Other alternatives include asking pairs to illustrate their findings by drawing on the board so that whole class share their findings with each other. The original application of the model is illustrated in Figure 3.1 below:

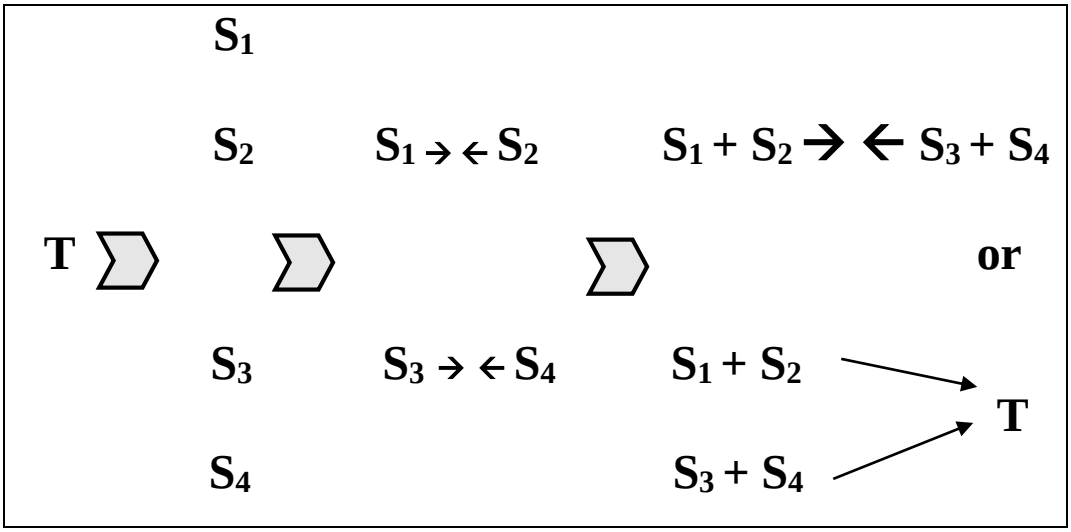

Figure 3.1. The Original Think-Pair-Share Model

The TPS model, however, was adapted and used with SRS in this study. Initially, students were provided with the contexts in which target vocabulary is written in bold. Next, they were asked to work on these words; "infer" the meaning of the target words, and find the part of speech for each and every one of them. After that, students were asked to find their pairs in various ways. Sometimes, teachers decided to pair stronger students with the weaker ones. Alternatively, more shy students were matched with rather assertive ones. Also, students were given the opportunity to find their own pairs. In the final stage, upon reaching a decision, couples were asked to submit their common answers through smartphones using Socrative to check if they

had got the correct answer or not. This was a true sharing exercise because everybody had a say in the answers and all the answers were available on the screen to all students. Therefore nobody had a sense of being "ignored" or isolated. Because only one of the partners was submitting the couple's answer, one mobile phone per pair was enough in these exercises. The adapted version of Think-Pair-SRS approach is shown in Figure 3.2 below:

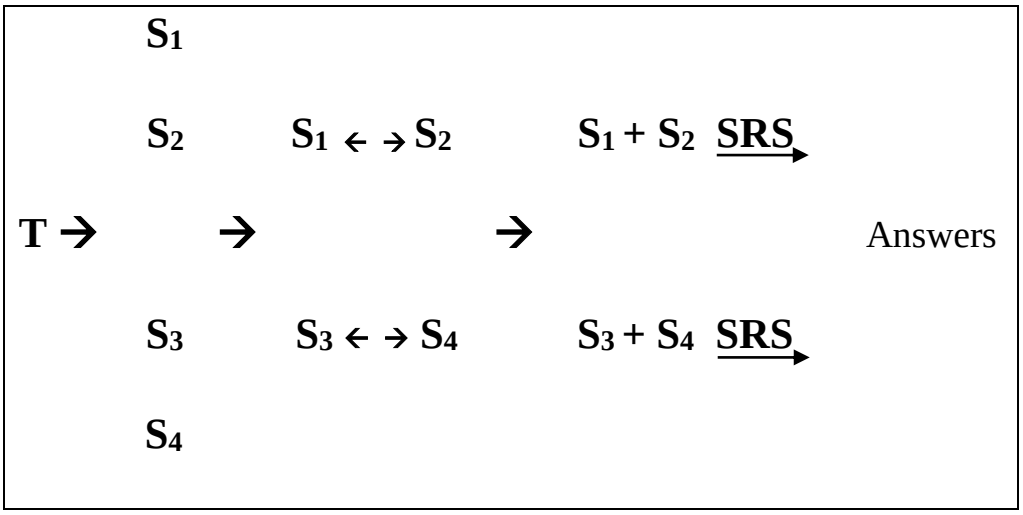

Figure 3.2. The Adapted Think-Pair-SRS Pedagogy

Figure 3.3. The Results Chart of SRS

Figure 3.3 shown above illustrates how students' answers are presented in class to provide feedback on the distribution of correct and incorrect answers across the questions and students. According to the adapted model, each pair has an equal chance to share their answers and compare their relative standing in the class.

3.5. Data Collection Instruments

Data were collected through multiple sources including: (a) Demographics test (See Appendix A), (b) Vocabulary achievement tests (See Appendix B), (c) SRS use perception survey (See Appendix C), (d) Students' reflections on SRS use through interview (See Appendix D), and (e) Instructors' reflections on SRS use through interviews (See Appendix E).

3.5.1. Demographics Test

Participants' demographics information was collected through Demographics test. The demographics instrument included sections on the profile of participants including distribution across gender, faculty, level of English and their interest and previous experience with certain educational tools. It also gives information about participants' possession of technological devices, level of internet access, the social media accounts that they have and 7 other 5-point Likert-type questions (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree) regarding participants' technology interest.

3.5.2. The Vocabulary Achievement Test

Students' achievement on vocabulary was measured through the vocabulary achievement test. The procedure to create this test was as follows: (a) Target units were identified, (b) Target vocabulary items were selected and (c) Test questions from the Teachers' Resource of the course book were compiled.

The Teachers' Resource is a component of e-resources. Along with an online workbook for students, an exam bank component is provided for institutions. See Figure 3.4 below for the illustration of the digital component.

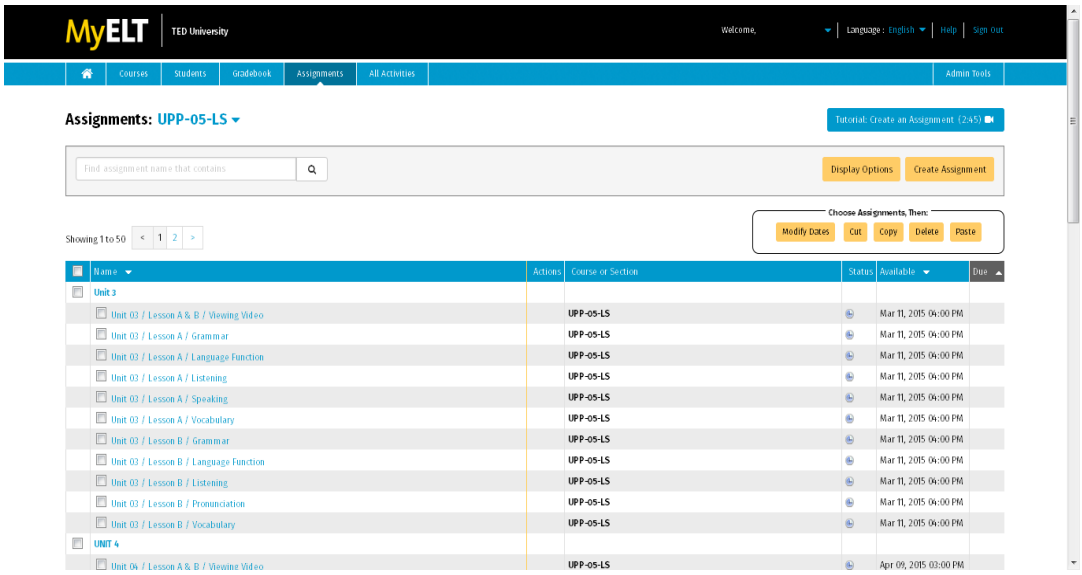

Figure 3.4. A Screenshot of the Digital Item Bank

The vocabulary achievement test made up of 20 unique items was created using the items in this bank. See Figure 3.5 below for an example question from the item bank. Although some of the tests were made up of multiple-choice questions with 3 options similar to what was used in the vocabulary achievement test, there were some other tests which had a set of 10 questions and 10 randomly ordered answers. Even though these type of questions were avoided not to cause any confusion while the items in the vocabulary achievement test were being created, still, some of them were preferred choosing 3 possible options among the 10 provided in that particular activity. Before implemented to control and experiment groups, the test was pilot tested by 2 English instructors and upon their feedback, distractors of 2 items in upper intermediate and 1 in intermediate test were revised. This test was administered to 2 intermediate and 2 upper intermediate experiment groups and 2 intermediate and 2 upper intermediate classes which were randomly chosen as control groups and given the test upon the consent of the instructors of these classes.

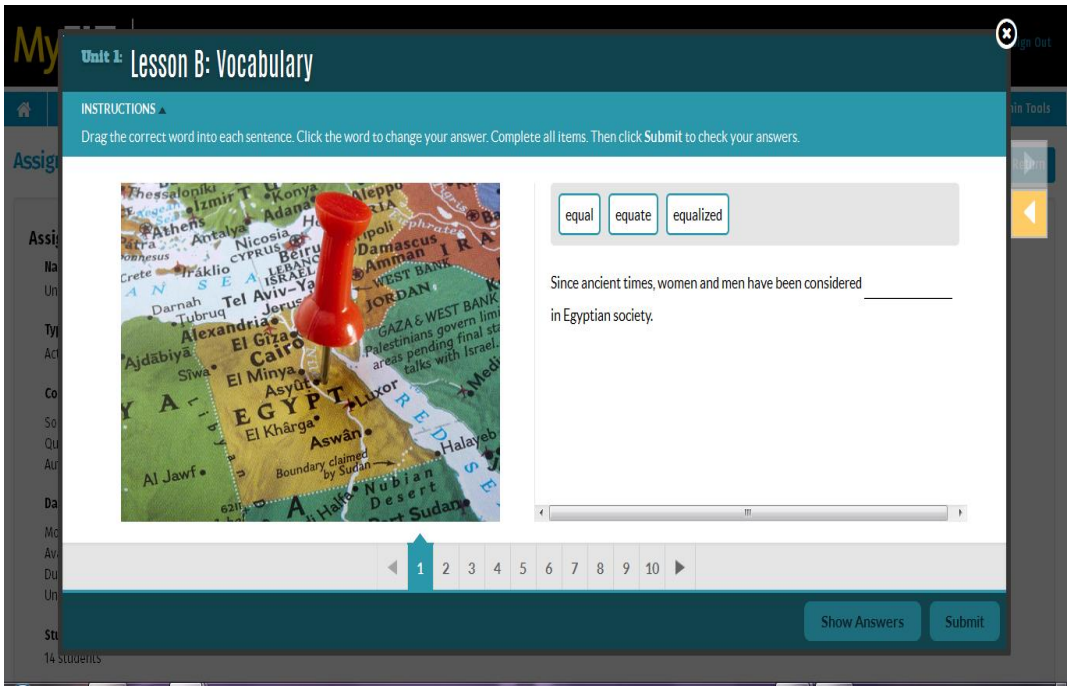

Figure 3.5. An Example Item Available in the Item Bank

3.5.3. SRS Perception Survey

Students' perceptions towards SRS activities were collected with the instrument developed by Richardson, Dunn, McDonald and Oprescu (2015). Designed completely as 5-Likert type scale, (1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree and 5 = strongly agree), the instrument provides data about participants' perception towards SRS experience. In the original survey, the items were divided into three main categories; namely the usability, the impact on student engagement and the impact on student learning consisting of 26 different items in total (See Table 3.4 below).

Table 3.4

Categories in the SRS Perception Survey

Name of the Categories	Number of Questions
The Usability of SRS	10
The impact of SRS on student engagement	11
The impact of SRS on student learning	5

10th, 15th, 22nd, 25th and lastly 26th items from the original survey were omitted due to the fact that these items were not in accordance with the objectives of this study in terms of what the research questions aimed to find out. First of these omitted items belonged to the usability scale while two items were omitted from each of the impact of SRS on student engagement and student learning scales. Therefore in total 5 questions from the original survey were not used in this study.

What's more, items 8 and 9 from the usability scale, and item 19 from the student engagement scale and the 25th item from the student learning scale were reworded as there were field specific terminology in the original items or they were written in a language which was beyond the level of participating students' proficiency level.

Furthermore, 1 item was added to the student engagement scale that was parallel to the research questions. Additionally, 4 more questions were added to the survey under the student learning category. These items which were concerning the use of mobile phones as SRS in classroom were selected among the suggested items presented in the same article.

To sum up 1 item from the usability and 2 from the impact of SRS on student engagement scale and 2 from student learning scales were removed and 5 new items were added to the survey in order to make it more aligned with the research questions of this study. In addition, the name of the tool used in the original format was replaced with that of the study; that is, Socrative is named as the SRS tool used for this study (See Appendix C for the edited version of the survey for this study). The test was administered through the website Qualtrics at the 14th week and analyzed on SPSS software.

3.5.4. Students' Reflections on SRS Use through Interview

Students' reflections about the SRS supported Think-Pair-Share pedagogy was collected with semi-structured interviews which were conducted the week after the SRS perception survey was administered in the 6th week of the study. The interview guideline included 8 questions were prepared initially to be addressed to the students in the interview (See Appendix D). These questions were created considering several issues: Firstly, questions were planned to be broader in terms of students experience not to limit their reflections. As instances occurred, asking probing follow-up

questions was the initial plan. Secondly, the questions were meant to be open-ended in order to invite the participants to contribute more freely and to avoid limiting their responses. Thirdly, using academic terms was avoided in order not to cause any trouble on the participants' side during the interview and also to avoid any misunderstanding. After their instructors were requested to inform their classes about the interview, 4 students from 2 intermediate experiment classes and similarly, 4 pupils from upper intermediate classes volunteered to take part in the interview and they were selected for semi structured group interviews that lasted around 23 and 31 minutes respectively. The interview dates were planned considering the weekly schedule of both students and the researcher. Upon their selection, students to-be-interviewed were asked for their approval which was recorded and the date of the interview was shared with all the participating students. The language of the interview was English. The interviews were both audio and video recorded to be on the safe side. Meanwhile, the researcher took notes to highlight important comments by the participants during the interviews. Even though there were 8 set questions to be asked initially, participants were encouraged to comment further by supplementary guiding questions which were developed and asked on an ad-hoc basis by the researcher. These include (1) Imagine that there is no Socrative and you are a shy student. So what would be different in that class for shy student without Socrative? How do these shy students behave in such classes? (2) How was getting instant feedback through SRS different from checking your answers in a teacher-centered whole-class feedback session?

3.5.5. Instructors' Reflections on SRS Use through Interviews

Seven instructors who were teaching 4 experiment classes were interviewed as a group about their SRS use experience in vocabulary teaching. When creating the interview questions for the instructors, the same route of creating student interview questions was followed. These questions were created considering several issues: Firstly, questions were planned to be broader in terms of students experience not to limit their thinking. As instances occurred, asking probing follow-up questions was the initial plan. Secondly, the questions were meant to be open-ended in order to invite the participants to contribute more freely and to avoid limiting their responses. Thirdly, using uncommon and low-frequency academic terms was avoided in order not to cause any trouble on the participants' side during the interview and also to avoid any

misunderstanding. The interview was done in English. Both video recording and audio recording were used to ensure that the safety of the interview data. While there were 5 set questions planned initially (See Appendix E), a number of follow-up questions were necessary to elicit the detail required by the study and so the interview was extended to about 25 minutes. Some of the questions that were unplanned but popped up during the interview include (1) What encourages them to compare themselves to the class standing? (2) Which type of pairing works better with Socrative and Think - Pair - Share approach to teach vocabulary? (3) Did you notice any difference between students' use of L2 in Socrative activities - non-Socrative activities?

3.6. Data Collection Procedures

3.6.1. Before Implementation

Aforementioned statement points out that the topic of SRS use in prep classrooms was studied for 6 weeks during 2014 – 2015 spring semester. The very first thing to do was to ask for voluntary instructors who were going to implement Socrative in their classrooms. This was done by asking through e-mail to all instructors. After selecting the instructors, they were given 3 different 45-minute workshops on the first, second and third of April consecutively. All of the participants attended all the sessions.

First session was about the aim of the study and what was expected of them and their classes. It was also discussed what kind of responsibilities they would have to undertake throughout the study as a participating instructor. All the expectations and responsibilities were mutually agreed on.

In the second meeting which took place the following day, Think-Pair-Share pedagogy was explained to instructors. After explanation of the theory, during the meeting, several questions were discussed: (a) what are the common practices in classrooms about teaching vocabulary?, (b) how is Think-Pair-Share different from current vocabulary teaching practices? and (c) what should be considered when implementing Think-Pair-Share for teaching vocabulary? At the end of the meeting, the instructors understood the original Think-Pair-Share model.

In the last session, which was held the next day, SRS to be used, namely Socrative, was introduced to instructors. Their accounts were created following the demo by the researcher. Its features were explored altogether. Teachers practiced the

tool as a student and a teacher and thus had a chance to see the capabilities of the tool. They also practiced on how to create, import and share quizzes in order for collaboration in the rest of the study, how to save and analyze student responses. By the end of the workshop, the instructors fully grasped the adapted pedagogy, Think-Pair-SRS, and the purpose of using SRS with the given framework. It was emphasized that it was important in terms of implementation of this pedagogy in their classes so that they all would be standard.

Also, on the final day of the week before the classroom implementation started, students were distributed demographics test.

3.6.2. Implementation

At the beginning of the study, students from the selected classrooms were informed about the purposes of the study and the role of the participants in it, and then were asked to fill a consent form if they volunteered. The study started with students filling out the demographics survey. For the following 6 weeks, SRS supported Think-Pair-Share pedagogy was applied.

For each vocabulary exercise, the participating instructors were send a number tag via e-mail to enable them import the quizzes which were prepared by the researcher at the beginning of the week. According to the weekly schedule, instructors used SRS with Think-Pair-Share pedagogy for vocabulary exercises in their classes. Due to different pacing or other variables, instructors were not expected to use SRS on the same day at the same class hour; yet, to use the tool according to the agreed implementation procedures in the workshops earlier. It was expected that due to those reasons, some classes might have used SRS earlier or later in a class hour, on a different day or with different timings. Nevertheless, the pedagogy remained constant in all the experiment classes for 6 weeks.

Then, the week before the semester ended, 14^{th} week, 4 experiment groups and randomly selected 2 intermediate and 2 upper intermediate classes were in the same lesson hour asked to sit a 20-item the vocabulary achievement test, which consisted of the target vocabulary the experiment groups had been taught for the last 6 weeks through the Think-Pair-SRS approach. Additionally, the perception survey was given to students because in the last week, students were more likely to suffer from exam anxiety and might have more positive or negative comments. Furthermore, students

who had not used their absenteeism might want not to attend classes in the final week, which may affect the dropout rate drastically. In order to prevent all these possible problems, the final test was conducted before the very final week of the semester.

3.6.3. After Implementation

In the 14th week, firstly 4 volunteer students from intermediate and later 4 more students from upper-intermediate classes were interviewed separately as a group on their experience in relation to SRS supported Think-Pair-Share approach on vocabulary learning. Finally, 7 instructors were invited to take part in a group interview about their experience with using SRS in teaching vocabulary. Briefly, in order to complete this procedure, students' vocabulary achievement test scores were collected at the end of the semester. Then interviews with both instructors and students were conducted for quantitative data collection based on their SRS experiences.

Thus, all the activities were expected to take place between 9th and 14th week of the semester, then qualitative and quantitative data collection started. The timeline for data collection can be found in Table 3.5.

As previously mentioned, this study contained no ethical concerns. The study was based on voluntary participation, participants' names and other information were kept confidential and used pseudonyms when necessary. Even though results of the study were not reflected on students' actual grades, statistical findings were shared later with students and the institution and would be made public after for academic and professional purposes based on the consent form participants signed.

Table 3.5

Data Collection Timeline

Week	Date	Activity	Phase
8	01.04.2015	Workshop 1: The details of the study	
	02.04.2015	Workshop 2: The pedagogy T-P-S	Pre
	03.04.2015	Workshop 3: The technology – SRS: Socrative and shift from T-P-S to T-P-SRS	implementation
	03.04.2015	Initial demographics test	
9	06.04.2015	T-P-SRS use	
	10.04.2015		
10	13.04.2015	T-P-SRS use	
	17.04.2015		
11	20.04.2015	T-P-SRS use	
	24.04.2015		Implementation
12	27.04.2015	T-P-SRS use	in progress
	01.05.2015		
13	04.05.2015	T-P-SRS use	
	08.05.2015		
14	11.05.2015	T-P-SRS use	
	14.05.2015		
	14.05.2015	Perception survey on SRS use	
	15.05.2015	Vocab achievement test	Post
15	18.05.2015	Interview with intermediate students	implementation
		Interview with upper intermediate students	
16	03.06.2015	Interview with instructors	

3.7. Data Analysis

The data collected for the study were analyzed both quantitatively and qualitatively. The vocabulary achievement test and the SRS perception survey results were analyzed quantitatively while student and instructor interviews were subject to qualitative analysis.

3.7.1. The Quantitative Data

Both the vocabulary achievement test and SRS use perception survey results were analyzed using the IBM SPSS Statistics 20 software.

Initially, in order to answer the first research question which was looking into the effect of SRS supported Think-Pair-Share pedagogy on vocabulary learning of EFL students, the vocabulary achievement test was administered through paper and pen tests and their results were entered into the SPSS software by the researcher himself in order to find out if the difference between the test results of experiment and control groups were statistically significant or not. In order to achieve the ultimate result, in the first step, normality test was done in order to determine if the test results allowed the researcher to a parametric or a non-parametric test based on the distribution of students' test scores. However, according to test of normality, Kolmogorow-Smirnow results for all groups showed that *p.* values for all the groups are smaller than 0.05 cut-off; likewise, Shapiro-Wilk test results point that *p.* values are not higher than 0.05 value. In other words, the null hypotheses was rejected and the results were statistically meaningful; consequently, the data were subject to a non-parametric test analysis. Therefore, instead of running a parametric test, of all the possible nonparametric tests, the Mann-Whitney *U* test for independent samples test was run.

Secondly, SRS use perception survey was administered online on the Qualtrics website which allowed the researcher to download the 5-point Likert scale test results as a file which is compatible and runs on the SPSS software directly. In order to figure out the choices of the participants regarding their SRS perception, the crosstab function which provided descriptive statistics was utilized. When using cross tabulation, the data were analyzed item by item in terms of perception of students.

3.7.2. The Qualitative Data

The qualitative data analysis was conducted on student and instructor interviews to answer to the second research question which was to examine students' and instructors' reflections on the use of SRS supported Think-Pair-Share pedagogy on vocabulary achievement of EFL students. The data were analyzed following the grounded theory. The theory was initially found by Glaser and Strauss in 1967. Fraenkel, Wallen and Hyun (2012) suggest that "grounded theories are not generated before a study begins, but are formed inductively from the data that are collected during the study itself" (p. 433). Johnson (2015) states that the collected data is constantly revised and compared across cases to find out similarities and differences.

As the grounded theory suggests, upon completing the interviews with student groups and instructors, the in-depth analysis of recurrent themes among the answers of students across the levels, the common and related answers were merged in one document under the headings: (a) gamification and engagement, (b) feedback, (c) anonymity and (d) other perspectives on SRS. It was a slightly different procedure for the instructors' interview. Since there was only one document for the instructors' interview, the whole document was thoroughly and closely examined and frequently occurring patterns identified and comments on those themes were gathered altogether. The reoccurring themes were found to be about: (a) engagement, (b) feedback, (c) cooperation and competition, and (d) reluctant students. Gradually, after the themes were identified, the interview data were used as a proof to explain the theories. The depth and scope of each theme was modified whilst the data were completely investigated. What is important to emphasize here is that instead of seeking for answers to a predefined set of themes, the data itself suggested its own themes. That is to say, an inductive approach was applied in the analysis of the interviews. This approach was intentionally applied as the relevant research question is not a directional one.

3.8. Validity

In terms of validity, there was no subject characteristics threat as all the participants' were already between the intended age range (17–20); also, another variable, proficiency level, was held constant by selecting students from the classes in which the same curriculum was followed. Considering the duration of the study, mortality was not a factor in the study considering the fact that nothing exceptional

that prevented students from connecting to Socrative occurred at any point during the study. As all the students participated in the activities, loss of participants was not an issue. Location was not a threat as the Socrative, the preferred SRS application in this study, was accessed and used in-class vocabulary activities. Therefore, whenever students accessed the system, they were not expected to feel any pressure or experience any problem related to the environment. However, Internet access might have been an issue. While the university provided free access to the Internet across the whole campus and in all the classrooms, it was anticipated that there might occur unknown short cuts during teaching hours, which might have forced students to shift into their mobile internet provider; yet, it may not be available all the time. Furthermore, Socrative was available to all mobile platforms – application for Android, iOS and Windows– and supported multiple web browsers such as Mozilla Firefox, Internet Explorer, Google Chrome and Safari and operating systems including Windows and IOS.

Quantitative data were analyzed by IBM SPSS 20, and qualitative data were collected from a comprehensible number of participants; therefore, instrument decay was not a threat for the study. Hence, evaluation was not expected to make the evaluator exhausted at the end of the evaluation process. Students were informed before the study began that any result of the tests would not affect their formal grades at all in order to prevent any psychological, motivational or emotional shifts. Additionally, for removing data collector characteristic threat, the researcher himself collected the data.

Content validity was already achieved for the attitude test that measured participation. However, interview questions for both students and instructors were piloted by another researcher before implemented. Pilot study was conducted in the same institution prior to the weeks study was conducted and any necessary modifications were done on the study.

3.9. Reliability

Richardson, Dunn, McDonald, and Oprescu (2015) assessed the reliability of the SRS perception test they developed and found that their instrument was reasonably reliable. See Table 3.6 for the reliability scores for each scale in the perception survey.

Table 3.6

Reliability Scores for Perception Survey

Student		Impact on engagement	Impact on learning	Usability
A	Pre-survey	45	51	12
	Post-survey	44	51	13
	Change	-1	0	1
B	Pre-survey	43	42	13
	Post-survey	37	35	13
	Change	-6	-7	0
C	Pre-survey	43	45	14
	Post-survey	44	43	13
	Change	1	-2	-1
D	Pre-survey	42	48	13
	Post-survey	47	39	12
	Change	5	-9	-1
Mean Change		-0.2	-4.5	-0.2

Table 3.6 compares pre-survey and post-survey scores of perception survey which was taken by 4 students in order to assess reliability of it. Items about impact on learning were more volatile compared to other two scales which were impact on engagement and usability. After all, mean differences revealed that the finalized version was reasonably reliable.

3.10. Limitations of the Study

There were several limitations in this study to be taken into consideration. Most important of all, because of several factors beyond the control of the researcher, the groups could not be formed with random sampling owing to the institutional constraints. Moreover, the tool was used by 7 different instructors albeit the prescribed pedagogy, practice of which might have slightly differed. Consequently, implementation threat might have mattered in this study inevitably because both students and instructors were biased in favor of Socrative. Likewise, the Hawthorne

effect could have been critical in this study; yet, it was inevitable due to the possible novelty effect of Socrative. Therefore, this might have an effect on the qualitative data collected from students.

Additionally, due to time constraints, the study was conducted only at a private university in 4 experiment classes in total. Therefore, the findings might not be representative for a specific population. However, as the ultimate aim of the study was to extend and deepen the SRS literature, this limited generalizability may not be regarded as a problem. Lastly, due to the research design, the lack of pre-test scores in vocabulary level of students made the interpretation less trustworthy and limited the generalizability of the findings. Nevertheless, the study was conducted with several groups simultaneously to collect more amount of data.

3.11. Ethical Considerations

This research followed all the ethical considerations required by the Human Subjects Ethic Committee at the university. All of the information regarding the participants were kept confidential. Accordingly, none of the true identities of the participants were revealed; yet, replaced with pseudonyms in the qualitative data analysis and reporting the findings. As informed in the consent forms, the participants had a right officially to quit the study at any point in case they wanted to do so. The students were also informed that taking part in the study would not have any effect on their formal grading. In addition, it was announced that the researcher himself was available to train the instructors and to clarify any misunderstanding of the students or the instructors throughout the study. The results of the study were shared with the participants.

CHAPTER 4

RESULTS

The purpose of this study was to investigate if SRS supported Think-Pair-Share pedagogy had any impact on EFL students' vocabulary achievement as well as their attitudes towards SRS use in language classrooms. Two research questions were investigated:

- Does the use of SRS supported think-pair-share pedagogy result in higher vocabulary achievement among university preparatory class EFL students?
- What are the university preparatory class EFL students' and instructors' attitudes towards SRS supported think-pair-share pedagogy in vocabulary learning?

4.1. The Vocabulary Achievement Test Results

The sample used to answer the first research question consisted of 154 students in intermediate and upper intermediate level university preparatory classes who were selected according to convenience sampling. In 2 Intermediate experiment groups, there were 34 students in total; likewise, in 2 randomly selected control groups, there were 34 students. On the other hand, in upper intermediate level, both experiment and control groups included 43 students. In short, 154 students were administered the test.

Of all the students taking the test, 68 students were taught at intermediate level and exactly half of them formed the experiment group while the other half were coming from randomly selected control groups. Similarly, out of 154, 86 students were taught at upper intermediate level. Half of this group (n = 43) were taught at two experiment classes while exactly the same number of students were selected from 2 random classes.

Table 4.1

The Distribution of Participants across the Study Groups

Level	Groups		Total
	Experiment	Control	
Intermediate	34	34	68
Upper	43	43	86

4.1.1. Normality Test Results

In order to analyze the test results across these groups, firstly a suitable test had to be determined. For this reason, a normality test was done in order to determine if the test results allowed to run any kind of parametric test based on the distribution of students' test scores. According to the test of normality, Kolmogorow-Smirnow results for the results of all groups showed that *p*. values for all the groups are smaller than 0.05 cut-off; likewise Shapiro-Wilk test results point that *p*. values are not higher than 0.05 value. See the table 4.2 for test results.

Table 4.2

Normality Test Results

		Kolmogorov-Smirnov[a]		Shapiro-Wilk	
	groups	*df*	*p.*	*df*	*p.*
Correct answer	Upper exp	43	,000	43	,005
	Upper control	43	,001	43	,002
	Inter exp	34	,006	34	,011
	Inter control	34	,001	34	,000

$p < .5$

According to the normality test results, the group scores were not normally distributed. Based on these results, instead of running a parametric test, one of the non-parametric tests, the Mann-Whitney *U* with 2 independent samples test was run. By doing this, intermediate, upper intermediate and control and experiment groups across the levels were compared.

Table 4.3

Descriptive Statistics of Groups

Groups	*min*	*max*	*M*	*SD*
Intermediate Experiment	7	20	15.41	3.09
Intermediate Control	4	18	13.79	3.82
Upper Experiment	10	20	16.56	2.34
Upper Control	10	18	14.44	2.49

Table 4.3 illustrates the mean scores for each group. Accordingly, intermediate experiment group (n = 34) had a higher mean (M = 15.41) while intermediate control group (M = 34) had a mean of (M = 13.79). Similarly, upper intermediate experiment group (n = 43) had a higher mean (M = 16.56) compared to that of upper intermediate control group (n = 43) whose mean was (M = 14.44).

In order to find out if these differences between experiment and control groups were statistically meaningful or not, the Mann-Whitney U test was run between experiment and control groups of each level in addition to the experiment and control groups across the levels.

4.1.2. Upper Intermediate Groups' Comparison

According to table 4.4, in both experiment and control groups, there were 43 students in upper intermediate level classes separately. The Mann-Whitney U test was conducted to evaluate the hypothesis that Think-Pair-SRS approach results in better vocabulary achievement compared to traditional vocabulary teaching. The result of the test was in the expected direction and significant (z = -3.8, p < .05). Therefore, it can be concluded that the difference between means of two groups were statistically meaningful and the study had a positive effect on the experiment group.

Table 4.4

Upper Intermediate Independent Samples Test Results

Group	*n*	Mean Rank	μ	Mann-Whitney *U*
Upper experiment	43	53.63	16.56	
Upper control	43	33.37	14.44	
Total	86			489

$p < .05$

4.1.3. Intermediate Groups' Comparison

The Mann-Whitney *U* test was also conducted to see if the difference was also significant for intermediate control and experiment groups. As it is illustrated in Table 4.5, when the results of two experiment and two control groups consisting of 34 students at intermediate level were compared, the result of the test was in the expected direction and significant ($z = -2.02$, $p < .05$). Therefore, the study was proven to have a positive effect on intermediate classes and the difference between control and experiment classes were found statistically significant.

Table 4.5

Intermediate Independent Samples Test Results

Group	*n*	Mean Rank	μ	Mann-Whitney *U*
Inter experiment	34	39.32	15.41	
Inter control	34	29.68	13.79	
Total	68			414

$p < .05$

4.1.4. Study Groups' Comparison

As a final comparison, all of the 4 experiment groups ($n = 77$) were compared with 4 control groups ($n = 77$) from both intermediate and upper-intermediate level (See Table 4.6). A Mann-Whitney *U* test was conducted to see if the difference was

also significant across the control and experiment groups. The result of the test was found to be significant (z = -4.11, p < .05).

Table 4.6

Independent Samples Test Results across the Groups

Group	*n*	Mean Rank	μ	Mann-Whitney *U*
Experiment groups	77	92.17	16.05	
Control groups	77	62.83	14.16	
Total	154			1835

p < .05

Analysis of the test results showed that the difference between the test results in experiment groups were higher in comparison to control groups in both levels and across the levels. According to the test results, all the experiment groups that used SRS supported think-pair-share pedagogy in vocabulary activities performed better in the vocabulary achievement test compared to the control groups. Furthermore, the Mann-Whitney *U* test results proved that the difference between the scores of the groups was statistically significant, which meant that the pedagogical approach chosen for this study resulted in meaningfully better results.

4.2. SRS Perception Survey Results

This study also aimed to find out the attitudes of EFL students and instructors towards SRS through the adapted version of the questionnaire originally developed by Richardson, Dunn, McDonald, and Oprescu (2015). This survey was administered online at the end of the 6th week-period. All of the students in the experiment classes where they were required to use SRS for vocabulary activities were given it. Students were asked to answer 26 questions in total by choosing one of the 5 options (1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, 5 = strongly agree).

4.2.1. The Usability of SRS

There were 10 questions in the perception survey relevant to the usability of SRS in vocabulary teaching. To 9 out of 10 items, students responded as either "agree" or "strongly agree." The most positive effect of SRS use was about its motivating factor as well as the fact that it allowed students to make quick and objective evaluation of their standing thanks to the instant results it provided. In addition, there was a group of students who were not on either side. They made up 20% of the whole population (N = 77). On the other hand, there was a balanced view among the students about the very first item in the survey. More than one third of the 77 students (n = 33) strongly disagreed or disagreed while a similar number of the students (n = 30) of them strongly or just believed it was a waste of time to use SRS in vocab learning (See Table 4.7 below).

Table 4.7

Distribution of Students' Attitude Responses across the Usability Items

Item	%		
	Negative	Neutral	Positive
Wasted time	43	18	39
Recommend	12	19	69
Motivation	10	13	77
Interaction	6	21	73
Instant feedback	12	23	65
Peer awareness	5	18	77
Instructors used results	13	18	69
Control over learning	16	13	71

4.2.2. The Impact of SRS on Student Engagement

There were 11 items assessing the impact of SRS on student engagement. According to results, students responded all of the items except for one within this group of the survey as either "agree" or "strongly agree", which can be simply interpreted as a very positive experience on students' part. The strongest point, based on the test results, was relevant to the easy usability of the application and the clear rationale behind it. In other words, for a great majority of the students (n = 61), it was no problem at all to use Socrative in vocabulary teaching and understanding the rationale behind its use was also important and convincing for the same number of students (n = 61). The last item, on the other hand, received almost mixed responses (See Table 4.8 below). The results might be open to different interpretations. One possibility is that, unlike what the other results suggest, even though it was useful and easy to use Socrative on their mobile phones, a considerable number of students (n = 26) experienced technical difficulties. Another possibility is that, due to the wording of the item which was grammatically positive; yet, negative in terms of meaning, students responded to this item in confusion.

Table 4.8

Distribution of Students' Attitude Responses across the Engagement Items

Item	%		
	Negative	Neutral	Positive
Think deeply	16	13	71
Correct but not understood	17	30	53
More confident	13	23	64
Increased participation	8	20	73
Active	9	27	64
Pay attention	10	18	72

Table 4.8 (continued)

Distribution of Students' Attitude Responses across the Engagement Items

Meaningful and unforgettable	15	21	64
Attendance	10	22	68
Easy to use	0	21	79
Understood the purpose	4	17	79
Tech problems	41	25	34

4.2.3. Student Learning

In addition to 2 items about student learning from the original test, 3 more items which were related to the mobile phone use were added to the test. Even though the first two items within this subsection seemed as positive as the previous ones, the last 3 items concerning mobile phone use received mixed results. More than one third of participants (n = 32) responded to the items about whether using their mobile phones was a distraction or not for their learning as "agree" or "strongly agree." Likewise, even more number of students (n = 34) stated that others' use of mobile phone was a distraction for them. For the majority of students (n = 36), it was not troublesome to use their mobile phones and they liked using them. Another significant figure came from the students who were neither positive nor negative about their experience in relation to mobile phones being disturbing for them to use in class (See Table 4.9 below).

Table 4.9

Distribution of Students' Attitude Responses across the Learning Items

Item	%		
	Negative	Neutral	Positive
Increased enjoyment	5	18	77
Anonymity good	10	18	72
Distracted for mobile use	38	21	41
Distracter because of others	29	27	44
Didn't like using phone	47	19	34

4.2.4. SRS Perception Survey Result Summary

The perception survey results regarding SRS use showed that the tool had an obvious positive impact on students. In terms of usability, engagement and learning, majority of the students had a positive response to the questions. The results revealed that student found SRS motivating, awareness-raising and recommendable to others. Nevertheless, more students believed using SRS was a waste of time, which was conflicting with the results of other items in the survey. Therefore, one explanation can be the wording of the item was misleading for the students. Moreover, according to survey results, it was meaningful and easy to use SRS for a great majority of students. The data also showed that using SRS had a positive effect on the participation of students and it helped students to focus more on the activities and think more deeply. While using their mobile phones anonymously was enjoyable for students, items regarding them being distraction received mixed responses. In spite of positive responses to SRS as a learning tool, more students preferred the choice that claimed they did not like using mobile phones, which was another confusing issue when all the

data were taken into consideration. All in all, students had a positive attitude towards SRS. Especially, usability and engagement parts received considerably positive answers compared to the learning items which rather dealt with technical aspects of the mobile phones.

4.3. Students' Reflections on the Use of SRS

The analysis of semi-structured interviews conducted with 4 intermediate and 4 upper intermediate students revealed four themes: (a) gamification, (b) quality feedback, (c) anonymity and, finally (d) different perspectives on SRS.

4.3.1 Gamification and Increased Engagement

The most frequent emphasis was on the gamification; that is, the innovation and enjoyment SRS brought to classroom. The main reason why this happened seemed to lie in the perception of students. That is to say, for students, using SRS was just like playing game for educational purpose, which rarely happens in a traditional classroom. The interaction and control over their learning led students to be more active participants in their learning process. Selen said that:

> I think Socrative it's like an application, game application, like "Who wants to be a millionaire?" but you don't earn any money but you earn the information - knowledge. You have knowledge.

Similarly, Aydın supported Selen's idea and added that:

> In our class we create groups and we work together, like a race – game.

For Gökmen, another student from upper group, using SRS was also like playing game. However, his words revealed that SRS acting game-like, he felt less stressful while answering questions and also, he was keener on answering all the questions. He said that:

> We intended to answer all the questions… Because this is like a game.

After all, it would not be wrong to claim that the more students enjoy in class thanks to SRS, the more likely they are to be active participants of the class activities, which can contribute to the student learning more eventually especially on condition that they are based on pedagogically sound designs.

4.3.2. The Quality of the Feedback Provided

Another significant feature that SRS provided was the quality of feedback each student received. Students differed in their understanding of how the feedback SRS provided helped them more. For instance, Tuğçe, an intermediate student, believed that it was much more useful getting immediate feedback from SRS than to ask her instructor to check her answers individually after she has finished the exercise. She said that:

> It (traditional teaching) is time consuming. Teachers comes near me for example. Explain give me some feedback. But in Socrative, it gives me some mistakes quickly than my teachers.

Another student from the same group believed that getting one-to-one feedback during SRS quizzes helped her to master self-correction, a skill considered to be one of the most essential ones for becoming an independent language learner. Selen expressed that:

> And you can see your mistake. And you can make up this mistake individual.

Another point which was underlined more frequently was related to the ease SRS provided the teacher with in order to identify problems in learning and address them in a way which best fits according to the needs of the group. In that sense, the fact that instant result the teacher collected via SRS enabled him or her to give a whole class feedback just to ensure the pacing of the rest of the allocated class time. Selen found the whole-class feedback particularly useful and commented on that:

> Because sometimes teacher don't have any time for example in one student, she or he can stay five minutes but we are in lesson or lecture, we have time and we have to finish this time for lesson. They can't focus on every student.

All in all, the feedback students received from SRS was useful in many terms. Especially, due to the fact that it was immediate, individual and that it enabled teacher to make alterations on his or her teaching were regarded positively by students.

4.3.3. The Power of Anonymity

One of the most noticeable effects SRS caused was the fact that being anonymous provided advantages for more number of students. To illustrate, as

opposed to vocabulary comprehension activities in a traditional teaching context where the affective filter is high, students who had relatively lower self-confidence were able to take an active part in the anonymous activities as the focus was not on the individuals but the outcome and they felt less threatened to share their ideas. Accordingly, Tuğçe stated that:

> Also, we can communication with our friends thanks to Socrative because my friend said that there are many shy people and they can't talk with me or her - him. So they can use nickname and they can write or choose answer easily.

Furthermore, it was one of the most frequently-highlighted comments that as the teacher did not really know who is doing how well, students were more interested in taking risk and attempting to answer in spite of the fact that they were not really sure what the answer was without the fear of making a mistake. On this issue, Ceylin said that:

> It is enjoyable because if you give a wrong answer, you don't lose anything and it can be more enjoyable thanks to this (being anonymous).

After all, it is possible to claim that when students are not forced to reveal their true identities, which are very fragile in the learning process, they are more likely to participate, take risk and learn from their own mistakes, which when considered altogether makes them better and more independent learners.

4.3.4. SRS and Beyond

In addition to increased engagement, better and "versatile" feedback, students believed that SRS had more to contribute to themselves. First of all, they believed it had an encouraging effect on students with lower self-confidence concerning that everybody even the best sometimes makes mistake and it is an indicator of that learning is taking place somewhere around. Selen claimed that using SRS was effective for both stronger and weaker students; particularly in that:

> I think it is efficient for both of them (stronger and weaker students). Yes, we have the stronger students but they are human and they can do mistake or make mistake. And it is normal. And weak students can see them. This person can do mistake and he or she don't be shy. Why I am shy? I be like him or her.

On the other hand, some students improved their risk-taking skills so that they were more competitive when challenged. By their self-confidence being boosted, they were more motivated to challenge others and improve their standing in overall results. Aylin expressed on the issue that:

> Using Socrative improved my competition skills, because I want to give answer correctly and I compare each other.

Another important point was the scaffolding the quizzes provided. Students believed that having such quizzes made them come up with their decisions at a faster rate in order not to fall behind on the results screen which provided real-time data. Ceylin shared that:

> It can help decisions faster for example. In choices, if you don't know word's meaning, you can see choices and sentences there and you can guess correct answer.

Perhaps what's more important is the fact that SRS use did not only contribute to their linguistic development, this helped them develop socially in terms of their interpersonal communication skills as well. Thanks to the pedagogy applied with SRS, students reported that they had more fruitful discussions, which in return helped them master the linguistic competence needed to succeed in the foundation year program. Accordingly, Gökmen said that:

> As my friend said before, we learn cooperation with our peers and we didn't only learn vocab, we learned cooperation or we tried to do the best I think.

4.4. Instructors' Reflections on the Implementation of SRS

The analysis of the semi-structured interviews conducted with instructors who implemented SRS in their classes during the study revealed four themes: (1) engagement, (2) versatile feedback, (3) an increased sense of cooperation and competition and (4) advantaged reluctant students.

4.4.1. The Engagement SRS Brings

What instructors emphasized most frequently about their SRS use experience was the engagement it caused in classroom. It was agreed by almost all of the instructors that the activities including SRS increased the students' level of active involvement in the activities. Nalan, on the issue, said that:

> They really like using their smartphones especially if you don't use Socrative, they use their smartphones anyway for different purposes; but when you say Okay, we will use Socrative in this lesson, they say *Hocam* Okay, we are ready, when are we going to log in? We are waiting for you? *Hocam* hadi. So their performance was very nice.

Moreover, Şeyda also observed such an enthusiasm about SRS activities in her class and she interpreted this effect as a result of the application – what was explained previously as gamification. Accordingly, she stated that:

> Everybody participated in Socrative and when we were teaching vocabulary through the book, not everybody does the exercise. But everybody is so excited to use Socrative because they associate it with their smartphones and they think of it as an app, as a game so they are more encouraged to do the tasks.

On the same issue, Nalan further commented that:

> Even they usually said *Hocam*, let's play Socrative. They really enjoyed.

This sentence was uttered by a shy and underachieving student. However, what is more important is the verb – play - they use. It shows that students perceived SRS activities more as an "activity" rather than being an "assessment" on their performances.

Also, the fact that students were more engaged thanks to SRS was a consequence of keeping their identities hidden. Students either used nicknames or were anonymous during SRS activities, which helped them to feel less threatened and shy because nobody would know if they made a mistake. Burak commented on this:

> And he (a shy student) doesn't mind making a mistake. It's just giving the answer.

From instructors' points of view, SRS was not only engaging but also motivating for almost all of the students even after the lesson moved on without it. This was stated by Esra:

> For most students, they were able to continue with the flow of the class after using Socrative.

In addition to these benefits, increased engagement SRS provided seemed to help students take control of their own learning. One of the most striking comments was about how it led students to self-correction. Accordingly, Kerim said that:

> And as they are highly engaged and concentrated on achieving these tasks, sometimes they do not even the teacher feedback I guess because when they get an answer wrong, they even find the right answer themselves because they are highly engaged in it. I liked it a lot actually.

Nalan supported this idea by saying that:

> They don't want to ask for the correct answer.

What she meant here was that the way the activities were conducted allowed students to learn from their own mistakes, which put the teacher into the role of a guide rather than the ultimate source of knowledge.

It was clearly understood from many different comments that SRS had a positive effect on students' engagement in class. Students perceived SRS activities as if they were a kind of game, which, in return, resulted in less fear of making mistake and more active participation in the activities. Besides, being anonymous helped students to take more risks as there was no possibility of "feeling ashamed" in front of others in class. It was also significant that once students were interested in the teaching, their motivation and interest remained high so that it was a more fruitful class session for both instructors and students.

4.4.2. Feedback with SRS

Instructors thought SRS use made a positive difference in terms of the feedback it provided compared to traditional vocabulary exercises. Of many features about the feedback SRS provided, one of the most commonly-shared one was related to the way feedback was shared with students. Instructors believed the feedback SRS provided

was very helpful for students as they were able to measure their relative standing within the classroom. Accordingly, Selen shared that:

> Normally, when they are doing, I am the one monitoring them and seeing who finished, what's going on etc. But this time, they could also be informed about who is doing what. So I was informing them. This pair is almost finished or this pair has just started. So they try to reach each other and they are informed about the other groups. So it was really fun for them.

Nalan commented further on the same issue and said that:

> In traditional one, they have the words and some kind of lists which have definitions and sometimes when they have only two or three definitions that they don't need to check their meanings, they just pair them up. So they don't need to think about it. But in Socrative, they had to think about the all the answers. And while doing, I am giving feedback actually I did the same thing. We focused on word formation, I make them to think and I think, it was better.

Her instruction using SRS results worked better in her classroom and she attributes this to the fact that students answered every single question just because they were engaged in and enjoyed using it.

In short, due to the fact that students were paying more attention to the activities run with SRS and they were able to learn their own standing in classroom, the feedback SRS provided was useful for them.

4.4.3. Cooperation and Competition

It was obvious in the answers instructors gave in the interview that the way SRS was used changed the atmosphere of the classroom to be not only more challenging but more cooperative as well. In contrast to traditional vocabulary exercises, students were much more willing to participate in activities conducted with SRS. Moreover, matching students with those they like more seemed to help them get more out of the activities. Accordingly, Esra stated that:

> I think they also liked working with their pairs too. When we do the exercises on the book, they are just doing on themselves, but this time, they had to work with each other. They looked at the vocabulary in the book, they discussed about it, they shared their opinions and they helped each other for the unknown vocabulary. And they enjoyed it. Especially the ones who like their pairs were the most enjoying ones I think. But when we pair them up because of some of the students didn't come, they had to work with some other students which they are not good at working together, they were kind of excited to know the person, they

> didn't get much enjoyment about it, but the other students liked it. So working with their pair was also good for them.

Likewise, pairing students who are not the favorites of each other also was so useful for all of the students that after they got used to each other, they performed and collaborated more than they used to. What's more, this encouraged students to share more, which changed the classroom dramatically. About this issue, Nalan said that:

> Also in our class, our students usually didn't want to work in pairs, because they didn't like their friends actually. But after explaining this study, they started to get used to each other and even they didn't talk to each other, they were able to study together. And it was really nice to see them that they shared something. And it affected also the classroom environment. They started to share.

Nalan tried different combinations while creating pairs for SRS activities. She observed pairs of different levels and came to the conclusion that the best pairs were those consisting of a strong and a weaker student even though couples with other combinations still benefitted from the activities. Nevertheless, she emphasized that in order for strong and weak couple to benefit from the activities, better partner of the couple should be supportive, encouraging and willing to share. She said that:

> I tried most of them (combinations) actually. So weak and sometimes weak and average studied together and they were really nice and but usually hardworking one and a weak but silent one but it depends on the hardworking student profile of course. They were really supportive. So it worked well! Hardworking and weak.

While some instructors tried using different types of pairing strategies such as weak-weak, weak-strong or strong-strong, some instructors preferred to give freedom to their learner about forming their own couples. Even though this seems similar to pairing them with their "best" friend from the teachers' perspective, letting them choose whoever they want to work with must have given them a sense of control over their learning. Also, students might have preferred to work with, instead of their closest friend in class, the person who can help them the most compared to the rest, which is a matter of motivation. Selen said that:

> In our class actually, I let them in pair up, so if they can choose their pair, it's way better.

Esra supported this claim on the basis of that once students understand that they were grouped based on their abilities, naturally, some of them resented and had a negative perception of the activities.

> And I think, they liked it most because I tried to pair them according to their levels and they didn't like it at the beginning.

She further commented on the issue that:

> There are some pupils in our class and so all of the students don't feel good when they are around those students, so it wasn't a good activity to pair them up. I just let them as others did, they were really participated in the activity.

It is not difficult to understand from the last excerpt that even the selection of their partners apparently changed the participation of students. Those who disliked their partners and didn't respond to questions changed their attitude after their partner was changed with someone they enjoyed working with.

In accordance with this, Kerim mentioned not forcing his students while creating their pairs and stated that due to the competitive nature of the tasks, even weak-weak pairs were over-performing. He said that:

> I let them pair up on a voluntary basis as well, and even when the weak students were paired up, they did a very good job because some kind of competition and game was involved in so they performed really really much better.

Another instructor, Burak, was in a complete agreement with Kerim. In addition to what Kerim stated, Burak emphasized that the way his students perceived and responded to SRS activities was not only cooperative, but competitive as well, which, for him, caused students to increase their performance and resulted in better learning. He said that:

> It creates a competitive atmosphere. They try to do better than each other.

Nevertheless, it was understood by the instructors that explaining the purpose of using SRS clearly was the key to success. Otherwise, competitive atmosphere might cause problems among students. Nalan shared her experience with her students:

> But after some time, they learned that this is not a competition, and they spend time and they take their time to do it and their performance was better. But the first trial was very nice, they tried to be the first.

She also tried to use SRS when teaching other skills as well. Once, she prepared a quiz and asked her students to take the quiz as a reading activity, which turned out to be a complete failure as she hadn't shared the rationale of the activity with her students. She said that:

> But for the open-ended short answers, I used in writing. I decided the sentence especially while teaching this however, although, tough, despite the fact that issue. So I started the sentence and I wanted them to finish the sentence and then I reflected all the answers on the board and we worked on sixteen possible answers and it was really nice. But, yes it takes a lot of time to think about different possibilities. And also I used in reading, but it was not very effective. Because they started to read the text really quickly, and they didn't understand the text, but the only aim was to be able to answer and they couldn't answer the questions. And then I changed the strategy; actually, I tried to change their mind, this is not a competition. You need to read and the next time we tried was better.

After all, the conclusion can be drawn from all these various comments that the way pairs are created have some effect on the engagement and participation of the students. The more freedom they are given during this process, the better outcomes they are likely to get in the end. Furthermore, students ought to be informed about why the activities are designed in such a way and what they are supposed to do in order to fulfil the potential of the activities.

4.4.4. Reluctance as a Former Problem

One of the most significant advantages of using SRS was its effect on reluctant students who were not a part of the in-class activities before. Nevertheless, thanks to SRS, they were able voice their opinions via SRS and became active participants of the activities.

Their passivity was removed due to its engaging nature according to one of the instructors. In a typical vocabulary exercise where usually volunteers or students showing "extrovert" characteristics were the ones who were more interested in sharing their ideas with the rest of the class publicly. However, meanwhile, shy students felt too uncomfortable to be in a situation in which everybody was looking at them and listening to what they were about to say attentively, which led them even not to comment on any question in the rest of the class time.

According to Burak, SRS helped such students to be able to communicate in a way with their teachers and get valuable feedback on their learning, which was almost impossible otherwise. He said that:

> I think even the shy ones benefited. Because you are doing something with a friend or partner and you're just giving your answer regardless of what the others are saying or giving. So they are just trying to do their assignment or task, so even the shy student has a word to say in Socrative.

Kerim supported this claim based on his own experience with similar students in his class. He suggests, because of the fact that students had to use their own mobile phones in order to voice their ideas, unlike previous experiences, they did not have to hear encouragement from their teachers over and over. That is to say, students showed more responsibility in terms of being involved in the activities. He added that:

> I'd agree with that because in traditional activities, it takes a lot of courage for a shy person to raise his hand and give the answer. But in this one, he has all the questions and answers and he just clicks a button.

Some instructors observed that shy students showed highest involvement in the activities during SRS use. Accordingly, Selen shared that:

> And they were much more active if we think about the all of the class, that was the most active time they were in the class.

Furthermore, Rüya said that SRS worked well with especially a certain types of students who showed average or relatively poorer performance in addition to the shy ones. She shared that:

> I think for my main class, it was better for average or weak students.

To cut a long story short, for shy students, using SRS was useful in many terms; especially it enabled such students who formerly did not want to volunteer or wish to be admitted to respond to questions to express their opinions in a way so that they became more engaged in the activities and felt like a part of the classroom.

The data gathered through the interviews with the instructors supported what the SRS perception survey and student interview results revealed. SRS has a positive impact on students in many ways. Through the data analysis, 4 main themes emerged for this interview. Similar to what students expressed in their interview, the most frequent response by the instructors was about how SRS transformed the vocabulary activities more engaging and fun. Several instructors mentioned that students' positive

reaction to SRS was very evident and it made things much easier on the teachers' part. Students were so eager that they were waiting for SRS activity to start in a typical lesson. The second theme was also one of those that appeared in student interview data. The feedback aspect of SRS received many comments. All of the instructors agreed that using SRS gave their students of a clear picture about their standing in their own classroom and this had a positive effect on their progress. Moreover, since their standing was available to everyone in the classroom, they were more conscientious when choosing their answers to the questions, which led them to think more deeply in return. Another theme that occurred continuously through the interview analysis was improving sense of cooperation and competition in the classroom thanks to SRS. That is to say, giving freedom to students in choosing their partners for SRS activities resulted in better collaboration of pairs. It was also revealed in the answers of the instructors that explaining the rationale and the purpose of using SRS for a specific activity was important and necessary in order to make the best use of SRS. Accordingly, one of the instructors stated that "But after some time, they learned that this is not a competition, and they spend time and they take their time to do it and their performance was better. But the first trial was very nice, they tried to be the first." The last theme was related to reluctant students. All the instructors observed many instances where students who hadn't been participating activities changed their attitudes and took a step forward to be a part of the activity. A statement by one of the instructors shows this contrast of reluctant students: "I'd agree with that because in traditional activities, it takes a lot of courage for a reluctant person to raise his hand and give the answer. But in this one, he has all the questions and answers and he just clicks a button." Considering all these comments and findings from the interview data with the instructors, it was evident that SRS helped the teachers in many ways. It was a helpful tool in not only delivering the content, but also encouraging students to take more responsibility on their learning.

4.5. Summary of the Results

According to the test results, majority of the students from both levels showed that they benefitted from the use of SRS when implemented with think-pair-share pedagogy. When the interview data were taken into consideration, it was understood that SRS helped students achieve not only academic success, but also develop their

critical thinking skills. Implementation of SRS supported Think-Pair-Share model created a competitive; consequently, a more engaging learning experience. Even though there were technical troubles obviously, based on the survey results, it can be claimed that the suggested pedagogy within this framework led students to a better metacognitive study of the vocabulary. Furthermore, while it was reported that it was enjoyable to use mobile phones as a part of vocabulary learning activities, more students thought it was a cause of distraction in their learning process and almost half of the students in experiment groups thought it wasted too much time to use SRS in vocabulary activities even though this could not be validated in the interviews.

CHAPTER 5

CONCLUSIONS

5.1. Discussion

The main purpose why this study was to examine the effect of SRS assisted think-pair-share pedagogy on vocabulary achievement of EFL students in both intermediate and upper intermediate levels in a private university in Turkey in Spring 2015. The population was determined on the basis of convenience sampling due to the institutional limitations on the researcher. Selected participants, both students and their instructors, were expected to provide data upon their SRS use experience in the related vocabulary exercises and consequently, contribute to the fast-growing literature of SRS. Prior to the beginning of this study, there was a lack of literature in the field of EFL and the effect of SRS in the field. The data were utilized by employing a mixed-methods methodology.

In the relevant literature, on one hand, there are many studies suggesting that technology has a motivating effect on learners, (Chinnery, 2006; McNicol, 2004; Naismith, Lonsdale, Vavoula, & Sharples, 2004; Norbrook & Scott, 2003; Roschelle, Sharples, & Chan, 2005; Thornton & Houser, 2003, 2004, 2005); on the other hand, Cardoso (2011) claims there is a serious scarcity of research revealing data about the effect of SRS use in language classes. The fact that a tool with such a potential hasn't attracted the attention of researchers in the field of language teaching, in contrast to relatively-more-explored fields such as management, physics, chemistry and psychology especially at the undergraduate level, leaves questions in ELT unanswered (Arnesen, Sivertsen Korpås, Hennissen, & Birger Stav, 2013; Auras, Bali, & Bix, 2010; Chan et al., 2013; Heaslip, Danovan, & Cullen, 2014; Latham & Hill, 2014).

According to Nellie Mae Education Foundation Report prepared by Moeller and Reitzes (2011), SRS is considered to be among the top-trending tools in the field of education. However, using technology just for the sake of doing so does not answer to the needs of learners as Mayer et al. (2008), Petersohn (2008) and Hockly (2014)

explain; it is rather how it is implemented. Accordingly, Klein (2009) suggests that when used with a constructivist approach, SRS has a greater potential to offer to educators and learners. For that reason, among applicable ones, think-pair-share model of Frank Lyman (1981) was selected and applied after being modified in order to create a framework for a valid implementation of the tool. With the original model, Utama, Marhaeni, and Putra, (2013), Jebur, Jasim, and Jaboori, (2012) and Fitzgerald (2013) prove that this model resulted in an increase in higher self-confidence and better learning results. In the adopted model, namely Think-Pair-SRS, students were supposed to participate in the "sharing" activity via their mobile phones and unlike the original model, every couple is to share their answers while in the original model, this happens between only one student and the teacher while other students have nothing to do except for inactively existing in the classroom during the activity. Hence, the ultimate question answered in this study was whether SRS helped students achieve better in their vocabulary learning. This study was significant especially in that it added to the growing literature on SRS in ELT.

Current study aimed to understand the impact of SRS on learners not only in terms of its effect on their vocabulary learning, but their attitudes towards learning with SRS as well. For this purpose, firstly, students' familiarity and habits with technological tools and internet were revealed. It was found that majority of the participants have a smartphone and spend more than 4 hours on the internet per day. More than two thirds of participants reported that they believed technology has a motivating factor on their learning in parallel to what Keengwe and Kang (2012), Norbrook and Scott (2003); Thornton and Houser (2003, 2004, 2005); McNicol (2004); Naismith, Lonsdale, Vavoula, and Sharples (2004); Roschelle, Sharples, and Chan (2005); Chinnery (2006) suggest. It was important to understand the mindset of Generation Z. In that sense, this study is in parallel with what the literature reveals.

Secondly, the analysis of vocabulary achievement test revealed that in both intermediate and upper intermediate levels, experiment groups achieved higher scores compared to that of control groups. In addition to that, across the control and experiment groups, there was again statistically meaningful difference. These results matched with the previous studies conducted by Agbatogun (2012) and Bergtrom (2006); yet, are at variance by the result of study conducted by Gray and Steer (2014) who found SRS to be ineffective in the results of students taking Earth Science course.

Hence, the adopted pedagogy Think-Pair-SRS achieved its purpose in that sense. Therefore, the pedagogy applied in this study provides a reasonable framework similar to what Langman and Fies (2010) concluded and answers to what Mayer et al. (2009), Petersohn (2008) and Hockly (2014) suggest to SRS users and researchers about being informed and principled about their technology choices.

The attitude survey results, originally created by Richardson, Dunn, McDonald, and Oprescu (2015), showed how students perceived their SRS experience and provided the researcher with the insights into which factors might have contributed to the achieved results in the vocabulary test. The first set of questions were focusing on the usability of SRS and the highest score was achieved from its motivating effect as Cardoso (2011) found out earlier. Another significant finding was related to its positive effect on interaction of students, which was earlier found in the studies of Bergtrom (2006) and Langman and Fies (2010). According to the second set of survey items, the ones dealing with self-confidence, increased participation and active involvement in the activities got positive responses from the majority of the students as Latham and Hill (2014) found earlier in their study conducted with students taking Organizational Behavior course in relation to the effectiveness of the technology. Participants also believed that Think-Pair-SRS pedagogy led them think about the vocabulary questions and answers more deeply. Another significant finding was when students were informed of the aim of using SRS, they were found to benefit more from the activities, which was concluded in the relevant literature by Lyubartseva (2013). Additionally, students had a positive attitude towards remaining anonymous while using SRS. This supported the result of study by Moredich and Moore (2007) who concluded that SRS especially helps timid and reluctant students to attend the learning process more actively by remaining anonymous; hence, feeling non-threatened. The final group of items were about using mobile phone as a part of activity. The data showed that more than two thirds of students found using their mobile phones for educational purposes enjoyable, which probably motivated them to be a part of the other activities more.

On the other hand, according to the data of the same survey, more than one third of the students voted for the option that using SRS wasted too much time. This is at variance with what Dunn, Richardson, Oprescu and McDonald (2013), Khan (2013) and Stowell (2015) found in their studies. Additionally, lexically or

syntactically negative other items received mixed responses. Half of the students responded positively to the question asking if they did not like using their mobile phones for vocabulary exercises. It was also the case with 2 more items written with "distract" which has a negative meaning albeit used in a grammatically positive sentence. Almost half of the students responded to questions inquiring if they were distracted for using their mobile phones in SRS activities positively, which conflicts with their earlier responses in the survey to the items dealing with SRS affecting their motivation, enjoyment and engagement. This finding is in accordance with what Rubio, Bassignani, White and Bran (2008), Carnaghan and Webb (2007), Koopen, Langie and Bergervoet (2013) and Anthis (2011) found in their studies. Nevertheless, at the same time, it is at variance with the results of studies by Preszler, Dave, Shuster and Shuster (2007), Terrion and Aceti (2012), Khan (2013) and Dunn, Richardson, Oprescu and McDonald (2013). These results could not be validated by student interviews and needs further investigation in later studies.

Lastly, interviews with both students and instructors analyzed and common themes emerging from their answers were clustered. While students were focusing on its game-like effect, the feedback, the anonymity and valuable skills learned from using SRS, the instructors provided details about how SRS empowered and fostered engagement, valuable feedback, cooperation and, at the same time, boosted shy students' self-confidence. The instructors strongly agreed with the findings of the study by Arnesen, Sivertsen Korpas, Hennisen, and Birger Stav (2013) who found out that starting a lecture with SRS helps instructors to keep students throughout the class time although it is not used later in class time. It was agreed by both the students and the instructors that SRS was useful especially for average or not-so-good learners and, in particular, shy students. However, this result was in contradiction with that of Kaiser and Wisniewski (2012), which concluded that successful learners benefitted more from SRS in their study. At the same time, current study was an answer to the call of Kaiser and Wisniewski (2012) who suggested investigation of the effect of SRS on the learning outcomes of weaker students in smaller groups. In the interview, this view was specifically supported. Another significant finding expressed quite a number of times by both the instructors and the students was related to the power of remaining anonymous while using SRS. They made it clear that to achieve the best out of SRS, students ought to be given the freedom to use nicknames or remain anonymous at all

costs, which, in return, turns out to be more active participation, more risk taking and an increased sense of challenge and, thus, motivation for the students. This points directly to what Latham and Hill (2014) found in their study about how students interpreted the anonymity of SRS-supported activities.

5.2. Conclusion

This study contributed to the growing literature on SRS by studying its effectiveness on vocabulary achievement of intermediate and upper intermediate level of language learners in EFL classes using data from various sources and perspectives. Namely the impact of SRS on vocabulary achievement of language learners, their perception and attitudes towards it and how instructors interpret their SRS experience made up the core discussions of this study. Considering the literature on SRS, this study, in a way, responded specifically to the criticisms of Keough (2012) and Cardoso (2011), who argued the tool bearing such a huge potential is not commonly preferred by EFL instructors and the growing literature does not respond to the effectiveness of this technology in the field of education. This study differed from many other SRS studies for being used with an original pedagogical framework and examined for its effectiveness in EFL classes – an understudied field. So, this study is believed to deepen the relevant literature and provide insights and inspiration to scholars and professionals looking into technology integration into language learning, m-learning and teacher education.

5.3. Recommendations for Future Research

The current study has implications for studies to be conducted in the future. To illustrate, initially, this study was conducted for a 6-week period. In order to validate the findings of this study and provide confidence, this study can be replicated within the same amount of time. Secondly, this design, can be applied for a longer period of time in order to test the possible effect of the tool on vocabulary retention, which might focus naturally on vocabulary development of language learners again. Thirdly, although this study focused solely on vocabulary development as a skill, it might, also, be worth considering its effectiveness in relation to other skills' development in language classes; such as grammar, speaking or writing thanks to its various features. In addition, this study was conducted only with intermediate and upper intermediate

level students due to limitations beyond control. Further studies could be conducted with students of other proficiency levels. Furthermore, alternatively, changing the variable of language level or age of the learners with the exact design can also provide data about how learners perceive SRS experience on the basis of their language proficiency or age. The findings of this study related to vocabulary achievement and perception results are unique to this group of participants within this unique context. More number of and varied data can add to and deepen the growing literature of SRS and its effect on development of different skills and how its effectiveness is affected by different language learners in terms of their language level.

In this mixed-methods study, a particular design, think-pair-share, was implemented unlike many other researches that used peer instruction model (Arnesen, Sivertsen Korpås, Hennissen, & Birger Stav, 2013; Gray & Steer, 2012; Nielsen, Helsen, & Stav, 2013). Thus, future researchers may implement a different pedagogy. Future researchers might consider working with another SRS other than Socrative or use multiple SRS in the same study in order to contrast their effectiveness. Another study, apparently, with a different pedagogy might be to use SRS in distance learning where students do not have face-to-face interaction with their instructor. Likewise, students' perceptions of SRS via mobile phones, tablets and computers can be contrasted to measure how much the device preferred matters to please and engage students. All of these possible topics can widen the spectrum of SRS and widen the limits for its usability not only in ELT but other learning contexts as well.

5.4. Implications for Practice

This study, with its unique design named think-pair-share, found a positive effect of SRS on vocabulary achievement of intermediate and upper intermediate level of university students. Therefore, this design can be used in language classrooms at undergraduate level as well university preparatory classes where progress in vocabulary achievement is meant to be assessed.

It was also found out that the more teachers have control over the tool, the better informed they become and, as a result, the higher self-confidence they have. In other words, this model and how to best implement it can be taught at universities in both English Language Teaching and other programs within the roof of faculty of

education as a part of pre-service teacher education curriculum. In addition to this, this design can be incorporated into existing in-service teacher education programs in different countries or settings with an effort to align them with technology integration into teaching and learning.

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APPENDICES

APPENDIX A

TECHNOLOGY DEMOGRAPHICS SURVEY

1. Gender
    a. Male b. Female
2. Faculty
    a. Faculty of Education
    b. Faculty of Business, Administrative and Social Sciences
    c. Faculty of Architecture
    d. Faculty of Engineering
3. Level
    a. Upper intermediate b. Intermediate
4. I have

    (You can choose more than one)

    a. Cell phone
    b. Smart phone
    c. E-book reader
    d. Tablet
    e. Laptop
    f. Desktop
5. I connect to the internet via

    (You can choose more than one)

    a. Free wifi provided by the university
    b. GSM Network (3g, etc.)
    c. Other: Please specify

6. Hours for the internet usage in a day
    a. Less than one
    b. One to two
    c. Two to three
    d. Three to four
    e. Four to five
    f. More than five
7. You use these devices to
   (You can choose more than one)
    a. Access the internet
    b. Send or receive email
    c. Download apps
    d. Get directions, recommendations, or other location-based information
    e. Listen to music
    f. Reach resources
    g. Check in or share your location
    h. Checking your social media account
    i. Participate in a video call or video chat
    j. Other: Please specify:
8. Which programs/software/website did you hear or use before?
   (You can choose more than one)
    a. Google (Gmail, drive, plus etc.)
    b. Facebook
    c. Twitter
    d. Instagram
    e. Pinterest
    f. Foursquare
    g. Swarm
    h. Tumblr
    i. Skype
    j. WhatsApp
    k. Flickr

l. Personal Blog
m. Dropbox
n. Prezi
o. Trello
p. Diigo
q. Socrative
r. Letsfeedback
s. Kahoot
t. Poll Everywhere
u. E-Choice
v. Edmodo
w. Other: Please Specify:

9. How interested are you in technology?

(1 – not interested at all / 5 – very interested)

a. 1 b. 2 c. 3 d. 4 e. 5

10. I pay more attention to classes when technology is used.

(1 – Strongly disagree / 5 – strongly agree)

a. 1 b. 2 c. 3 d. 4 e. 5

11. I am sure I can do advanced work with technology.

(1 – Strongly disagree / 5 – strongly agree)

a. 1 b. 2 c. 3 d. 4 e. 5

12. I can get good grades in courses related to technology.

(1 – Strongly disagree / 5 – strongly agree)

a. 1 b. 2 c. 3 d. 4 e. 5

13. I do my course related responsibilities better by using technology.

(1 – Strongly disagree / 5 – strongly agree)

a. 1 b. 2 c. 3 d. 4 e. 5

14. I get more motivated in classes which involve technology use.

(1 – Strongly disagree / 5 – strongly agree)

a. 1 b. 2 c. 3 d. 4 e. 5

15. I can use technology in every part of my life in different ways.

(1 – Strongly disagree / 5 – strongly agree)

a. 1 b. 2 c. 3 d. 4 e. 5

APPENDIX B

VOCABULARY TESTS

INTER VOCABULARY TEST

Class No:

Date: …../……/…..

1. When lightning _____ a house, it causes fire.

a)violence b)strikes c)extends

2. Tornadoes often _____ in the afternoon.

a)occur b)forms c)violence

3. Severe weather can happen when cold air and hot air _____.

a)meets b)friendship c)collide

4. Many people were injured during the _____ storms.

a)excited b)region c)violent

5. Some people complain about the heat in Florida, but I love the tropical _____ here.

a)climate b)friendship c)attitude

6. Wildfires are _____ dangerous on a windy day because the fire spreads quickly.

a)particularly b)carelessly c)normally

7. You should never smoke while putting gasoline in your car as the _____ could catch on fire.

a)fuel b)cigarette c)clothing

8. It is _____ to call the fire department when you see smoke in your home.

a)possible b)unlikely c)logical

9. Many artists get their _____ from nature.

a)talents b)inspiration c)unhappiness

10. A person who designs buildings is an _____.

a)archive b)architect c)architecture

11. That building has a _____ that makes it different from any other structure.

a) distinctive style b)nondistinct style c)instinctive style

12. We are _____ making this a beautiful home.

a)committed of b)committed to c)committed on

13. A _____ is a place where people can go to pray.

a) ritual b)transportation c)temple

14. The _____ in a mural can give us clues as to what life was like thousands of years ago.

a)images b)sounds c)fragrances

15. There are many historical _____ in Guatemala.

a) plates b)tombs c)sites

16. People who live near volcanoes must _____ when they erupt.

a) react b)evacuate c)hide

17. Volcanic ash _____ the weather.

a)affects b)effects c)effective

18. People who live in houses with reinforced walls are more likely to _____ an earthquake.

a)survive b)disappear c)kill

19. Scientists don't always agree. Sometimes they _____ over evidence they find.

a)construct b)debate c)discover

20. The public _____ system in Ankara takes us to even Bala or Haymana.

a)transfer b)transition c)transportation

UPPER VOCABULARY TEST

Class No:

Date:…../…../…..

1. I used my smartphone to take a _____ of the presentation so I could watch it again later.

a)television b)video c)evidence

2. British singer and composer Martin and his dear family live far away, but I plan to _____ them soon.

a)reach b)realize c)visit

3. Huge crowds gathered to watch the _____ as it came down the street.

a)legendary b)migrants c)parade

4. If you _____ your car on the side of the road, the police will take it away.

a)abandon b)define c)precious

5. Small shops in our town have been _____ since large chain stores have opened nearby.

a)legendary b)vanishing c)attractions

6. My great grandfather _____ from his homeland to marry my lovely great grandmother in another continent.

a)emigrated b)immigrated c)emigrant

7. Haiku is an interesting form of _____ which consists of 3 lines.

a)novel b)poem c)song

8. Some children have the privilege of being _____ by their grandparents.

a)raised b)grown up c)elevated

9. A photograph can _____ a person's emotion.

a)capture b)impress c)break

10. A talented writer can _____ how other people think and feel about a topic.

a)call b)remind c)influence

11. Only teachers have so much _____ into how children perceive the world.

a)put b)insight c)turn

12. Many people feel uncomfortable discussing _____ topics with others.

a)politic b)political c)politics

13. I know I can read the news online, but I prefer to read _____ newspapers just like they say "Old habits never die."

a)printed b)published c)softcopy

14. It is important to be kind to people. _____, you will not be liked in your community.

a)eventually b)in fact c)otherwise

15. Unless you confirm the source, information on the Internet is not necessarily %100 ____.

a)misleading b)accurate c)questionable

16. What does a university _____ from having a huge library?

a)mention b)express c)gain

17. After reading 2 books and 3 articles on Canada, now I have a _____ of what it feels like to live there.

a)version b)vision c)photograph

18. Actually there is _____ between what you say and do. You say you hate hard work, yet you want to be the greatest ever. Does it make sense!

a)inconsistency b)likelihood c)similarity

19. A young woman _____ my seat in the café, so I had to find another one.

a)occupied b)shared c)borrowed

20. My house is _____ from any point of the city. Don't worry, it's not possible to miss it.

a)shared b)attraction c)visible

APPENDIX C

SRS PERCEPTION SURVEY

Following questions are about your perception of Socrative use in vocabulary learning. Please answer the questions honestly and truthfully as there is no right or wrong answer. Thank you for your cooperation.

1. Gender

a. Male b. Female

2. Choose your level

a. Upper b. Inter

3. Using Socrative for vocabulary learning wasted too much time.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

4. I would recommend that the lecturer continue to use Socrative in other aspects of class.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

5. The use of Socrative helped increase the classes' overall value.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

6. Socrative use in vocabulary activities motivated me to learn.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

7. I found this method of interaction between students and lecturer effective.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

8. Socrative helped me get instant feedback on what I knew and didn't know.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

9. The use of Socrative helped increase my awareness of my peers' opinions and attitudes.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

10. Socrative allows me to better understand vocabulary.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

11. My instructor used the results from Socrative to measure class understanding and reteach vocabulary that was not understood.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

12. I believe that Socrative provided me with more control over my learning than in classes that do not use Socrative.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

13. Using Socrative helped me think more deeply about vocabulary.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

14. I often voted for the right answer without really understanding.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

15. Using Socrative made me more confident to participate in class.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

16. Socrative increased the frequency of my direct participation in the course.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

17. The use of Socrative helped me to be active in class.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

18. Using Socrative helped me pay more attention in class.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

19. Using Socrative made the target vocabulary more meaningful and unforgettable for me.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

20. Using Socrative has encouraged me to attend lectures.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

21. For me it was easy to use the Socrative.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

22. I understood the purpose of using Socrative for vocabulary learning.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

23. There were too many technological problems using Socrative.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

24. Using Socrative has increased my enjoyment of classes.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

25. Being anonymous/using nicknames encouraged me to be an active participant in the class.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

26. I was distracted from the class for using my phone in class.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

27. I was distracted by other people using their phones in class.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

28. I didn’t like using my phone to vote.

a. strongly disagree b. disagree c. neither agree nor disagree d. agree e. strongly agree

APPENDIX D

INTERVIEW QUESTIONS FOR STUDENTS

- How do you think Socrative affected your vocabulary learning?
- How do you think Socrative affected your learning process in general?
- How do you think Socrative affected your participation?
- How do you think Socrative affected your engagement in class?
- How useful was using Socrative to get feedback on your learning?
- How did being anonymous affect your learning/engagement?
- What are other advantages of Socrative?
- What are disadvantages of using Socrative?

APPENDIX E

INTERVIEW QUESTIONS FOR INSTRUCTORS

- How did Socrative affect your teaching?
- How did Socrative affect students' engagement?
- Which type of students benefitted from Socrative more/less? Why?
- How do you think being anonymous helped students?
- What are other advantages or disadvantages of Socrative?

APPENDIX F

INFORMED CONSENT FORM

Dear participant,

This study is conducted by instructor Sercan Çelik of English Language School, TED University. The aim of the study is to collect data about the effectiveness of Student Response Systems (Socrative) on EFL students' vocabulary achievement and students' perception of it. Participation in the study is on a voluntary basis. No personal identification information is required in the questionnaire. Your answers will be kept strictly confidential and evaluated only by the researcher; the obtained data will be used only for scientific purposes.

For this study, you will be asked to use Socrative 12 times throughout 6 weeks period and answer in total 3 questionnaires. These questionnaires do not contain questions that may cause discomfort in the participants. However, while participating any questionnaire, for any reason, if you feel uncomfortable, you are free to quit at any time. In such a case, it will be sufficient to tell the person conducting the survey (i.e., your instructor or the researcher) that you haven not completed the questionnaire.

After all the questionnaires are collected back by the data collector, your questions related to the study will be answered. I would like to thank you in advance for your participation in this study. For further information about the study, you can contact instructor Sercan Çelik from English Language School, TED University (E-mail: sercancelik@msn.com).

I am participating in this study totally on my own will and am aware that I can quit participating at any time I want/ I give my consent for the use of the information I provide for scientific purposes. (Please return this form to the data collector after you have filled it in and signed it).

Name Surname Date Signature

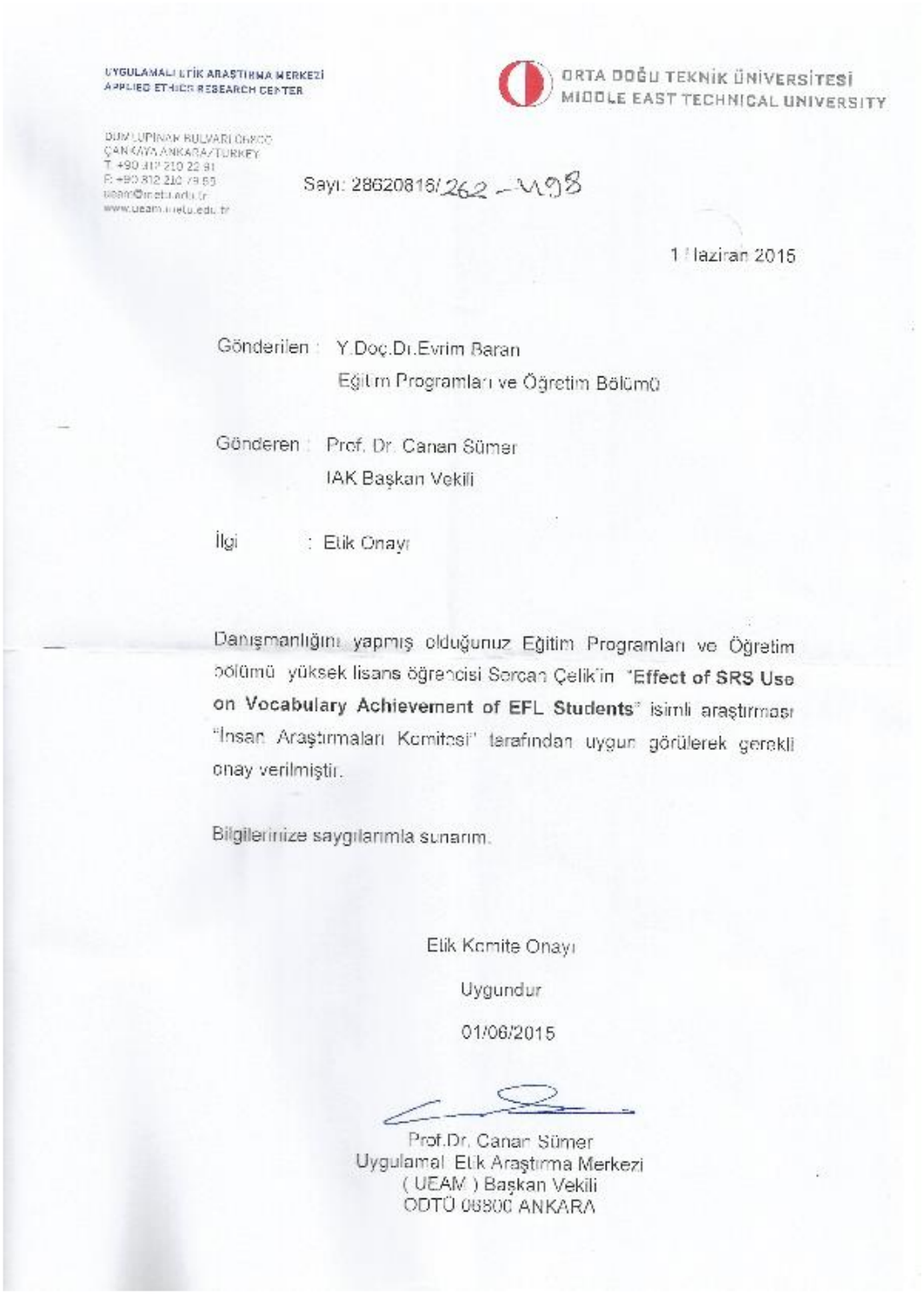
Level

_____ ----/----/----- _____

_____

APPENDIX G

APPROVAL OF THE ETHICS COMMITTEE



UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

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1 Haziran 2015

Gönderilen : Y.Doç.Dr.Evrim Baran
Eğitim Programları ve Öğretim Bölümü

Gönderen : Prof. Dr. Canan Sümer
IAK Başkan Vekili

İlgi : Etik Onayı

Danışmanlığını yapmış olduğunuz Eğitim Programları ve Öğretim bölümü yüksek lisans öğrencisi Sercan Çelik'in "**Effect of SRS Use on Vocabulary Achievement of EFL Students**" isimli araştırması "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

01/06/2015

Prof.Dr. Canan Sümer
Uygulamalı Etik Araştırma Merkezi
(UEAM) Başkan Vekili
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APPENDIX H

TURKISH SUMMARY

21. yüzyılın başından itibaren, hızla gelişen ve değişen teknolojiler artık yaşamımızın vazgeçilmez birer parçası oldular. Eğitim açısından bakacak olursak, özellikle ikinci nesil internet hizmetleri (web 2.0 araçları) ve sayıları hızla artan taşınabilir araçlar, insanların yaşam tarzıyla birlikte her alanda alışkanlıklarını değiştirmiş, yeni boyutlar getirmiştir. Z jenerasyonu olarak nitelendirilen ve teknolojinin içinde büyüyen yeni nesil, teknolojiyi geçmiş dönemlere oranla daha fazla oranda kullanmakta ve daha fazla sanal etkileşim kurmaktadır. Wang (2014)'ın da belirttiği gibi, teknoloji ve internetin bu kadar kolay erişilebilir olması, eğitim araştırmacılarını, eğitimde teknolojiye daha fazla yer verme konusunda çalışmaya yönlendirmiştir.

Her zamankinden daha hızlı şekilde dijitalleşen dünyada, özellikle sağladıkları pratik faydaları yüzünden, insanlara en fazla yarar sağlayan teknolojik araçlar mobil ürünler olmuşlardır. Bu teknolojilerin, günümüzdeki en yaygın formatları tablet bilgisayarlar ve cep telefonlarıdır. Birleşmiş Milletler Telekomünikasyon biriminin 2009 tarihli raporuna göre o zamanki dünyadaki kayıtlı cep telefonu kullanıcı sayısı 4.6 milyar insandı. Bu da dünyanın o zamanki toplam nüfusunun %67'sine denk gelmekteydi. Aynı kurumun 2015 raporunda ise, 2015 yılı sonuna kadar tüm dünyada kayıtlı cep telefonu kullanıcı sayısı en az 7 milyar olarak öngörülmektedir. www.gsmintelligence.com ve www.census.gov/popclock/ verilerine göre, şu anda dünya nüfusu 7.2 milyar iken, kayıtlı cep telefonu sayısı ise 7.5 milyardır. Bu rakamlara göre insanlık tarihinde ilk kez böylesi bir teknolojinin sayısı mevcut nüfusun üzerine çıkmıştır. Bu durum, İngilizcenin küreselleşen dünyadaki artan önemiyle birlikte, bu teknolojilerin günlük kullanımın yanında insanlığın diğer hizmetlerine de sunulması için ciddi bir potansiyel oluşturmaktadır.

İngilizce sınıflarında teknoloji kullanımının özellikle öğrenciler arasındaki etkileşimi arttırdığı, farklı türlerdeki ortamların kullanımına fırsat tanıdığı ve öğrencileri motive ettiği bilinmektedir. Hockly (2014, p. 81)'nin de belirttiği gibi, teknoloji "öğrencilerin daha önce ulaşmaları mümkün olmayan durumlarda ve formatlarda öğrenme materyallerine erişimlerini mümkün kılmıştır." Bu şu anlama gelmektedir teknoloji öğrenmenin önündeki zaman ve mekân engelini ortadan kaldıran yegâne araçtır. Ayrıca De Haan (2005) ve Jonaessen (2007)'in öğrenilen bilginin başka ortamlara uygulanabilip kullanılması olarak tanımladıkları anlamlı öğrenmenin teknoloji tarafından desteklendiği bulunmuştur. Bu durum özellikle İngilizcenin yabancı dil olarak öğrenildiği, hedef dile sınıf dışında erişimin kısıtlı olduğu ortamlarda, sınıf içi aktivitelerin daha verimli geçmesi gerekliliğinden dolayı önem kazanmaktadır. Agbatogun (2012) bu durumu desteklemiş ve bir yabancı dilin en iyi şekilde öğrencilerin birbirleriyle etkileşimde oldukları ortamlarda ve öğrendikleri yapıları kullanabilecekleri ortamlar yaratıldıklarında öğrenileceğini ifade etmiştir. Yani, teknolojinin, öğrenme deneyimini daha etkileşimli, anlamlı ve gerçek yapmak gibi önemli bir özelliği vardır.

Yenilikçi teknolojilerden Öğrenci Yanıt Sistemi (ÖYS) en çok gelecek vadeden araçlardan birisi olarak kabul edilmiştir (Moeller ve Reitzes, 2011). Bu sistem 3 temel bileşenden oluşur. Öncelikle, öğretmenin soruları soracağı, aktiviteleri yönlendireceği ve öğrencilerin cevaplarını görüntüleyeceği, öğretmenin kontrolünde olan ve uygulamayı ya da internet sitesini tarayıcı üzerinden çalıştıracak bir masaüstü, dizüstü ya da tablet bilgisayar veya bir akıllı telefon; öğrencilerin soruları ve cevap seçeneklerini görüntüleyip tercih yapacakları taşınabilir cihazlar; iletilen cevapları tercihe bağlı olarak anında gösterecek bir ekran kullanılır. ÖYS, öğretmenin önceden hazırladığı ya da anında oluşan soruları öğrencilere sormasına ve öğrencilerin ellerindeki taşınabilir cihazlar aracılığıyla bu sorulara hemen yanıt vermelerine imkân sağlayan bir sistemdir. Öğrencilerin verdikleri cevaplar tercihen öğrencilerle paylaşılabilir, kayıt edilip daha sonra kullanılmak üzere sistem veri tabanında ya da öğretmenin kullandığı ana bilgisayarda saklanabilir. Sistem verilen cevapların dağılımına göre özellikle öğretmene, ders planı üzerinde hızlı değişiklikler yapmak için önemli bir veri sağlar.

ÖYS'nin ilk kullanımı 1970'lere dayanmaktadır. Fakat özellikle son dönemde, yukarıda bahsedilen faydalarından dolayı yeniden önem kazanmıştır. Bu süre zarfında ÖYS'ler kablolu ve düğmeli yanıt sistemlerinden kablosuz, kullanımı kolay uygulamalara dönüşmüştür. Bu uygulamaların neredeyse tamamı, farklı işletim sistemleri, marka ve modellerle uyumlu çalışabilmektedir. Bu çalışmada, daha yenilikçi uygulamalar arasından Socrative, www.socrative.com, kullanılmıştır. Bu karara varılırken çeşitli faktörler gözetilmiştir. Öncelikle, araştırmacının kendisi daha önce bu uygulamayı kullanmış ve avantajları ve dezavantajları hakkında birinci elden bilgi sahibi olmuştur. Ayrıca, uygulama tamamen ücretsizdir. Dahası, uygulama farklı işletim sistemleri ve internet tarayıcılarıyla uyumludur; böylece olası bir teknik uyuşmazlık en aza indirgenebilmiştir. Öte yandan, bazı ÖYS uygulamalarının aksine, bu uygulamayı kullanırken, soru ve cevapları, her kullanıcı kendi cihazında görebilmektedir. Ayrıca, bu çalışmada da kullanıldığı gibi, hazırlanan sınavlar sistem tarafından atanan eşsiz numaralarının paylaşılmaları koşuluyla diğer kullanıcılar tarafından kendi hesaplarına eklenebilmektedir.

Bu çalışma ÖYS kullanımının yabancı dil sınıfı öğrencilerinin kelime öğrenimlerine bir etkisi olup olmadığını incelemiştir. Özellikle, bu çalışmada, ÖYS destekli Düşün-Eşleş-Paylaş tekniğinin, hazırlık sınıfı öğrencilerinin kelime öğrenmeleri üzerinde bir etkisi olup olmadığı ve yabancı dil sınıfı öğrencileri ve öğretmenlerinin ÖYS destekli Düşün-Eşleş-Paylaş tekniğine karşı tutumları incelenmiştir. Bu amaçla Türkiye'de özel bir üniversitede, 2015 bahar döneminde, uygun örnekleme yöntemiyle belirlenmiş, 4 tane orta seviye ve 4 tane de ileri-orta seviye hazırlık sınıfıyla çalışılmıştır. Bu çalışmada toplamda 154 öğrenci ve 7 okutman yer almıştır.

İngilizceyi yabancı dil olarak öğrenenler, doğal olarak, hedef dildeki kelime ve yapılara yeteri kadar maruz kalamamaktadırlar. Bu nedenle, öğrenme ortamlarındaki verimliliği arttırmak çok önemlidir. Ayrıca, öğretmen-merkezli öğretim metotlarının uygulanmasından dolayı, her öğrencinin eşit ve aktif bir şekilde derse katılması bir problem oluşturmaktadır. Bu durum yapılandırmacı yaklaşımın ilkeleriyle de çelişmektedir. Teknolojinin derste kullanımı, öğretmen açısından farklı öğrenme tarzlarına hitap edebilmeyi mümkün kılar. Bu çalışma, gelişmekte olan ÖYS literatürüne katkıda bulunmuştur. Ayrıca, çalışmanın sonunda profesyoneller

tarafından sınıflarda kullanılmak üzere uygulama önerileri ve araştırmacılara yön gösterecek araştırma önerileri sunulmuştur. Ayrıca çalışmada, literatürdeki birkaç eksik noktaya değinilmiştir.

Öncelikle, ÖYS teknolojisi genellikle lisans düzeyindeki fen, işletme ve psikoloji derslerinde, birkaç yüz kişilik öğrenci gruplarıyla kullanılmaktadır. Fakat yabancı dil sınıfları da, bu teknolojinin sağladığı etkileşim ve motivasyondan dolayı büyük potansiyele sahiptir. Literatürde hâlihazırda çeşitli çalışmalar mevcuttur. Fakat bunların bir kısmı yetişkinlerle yapılmıştır. Prensky (2001) bu yaş grubunu "dijital göçmenler" olarak nitelendirmiş ve bu grupta yer alan kişilerin teknolojiyle olan ilişkilerini ilk ve ortaöğretim seviyesindeki "dijital yerlilerden" farklı olduğunu belirtmiştir.

Mobil öğrenme başlığı altında, yeni mobil teknolojilerin, sonuçları ispat edilmiş bir şekilde öğrenme ortamlarına uyarlanması için çalışmalar yürütülmektedir. Şu ana kadar mobil teknolojilerin öğrenme üzerine olumlu etkisi olduğunu ortaya koyan birçok çalışma yapılmıştır (Chinnery, 2006; Naismith, Lonsdale, Vavoula, & Sharples, 2004; Roschelle, Sharples, & Chan, 2005; Thornton & Houser, 2005). Fakat Cardoso (2011) ve Mork (2014)'a göre öğrenci motivasyonunu ve etkinliğini arttırmalarına, öz-değerlendirme ve sınıf içi etkileşimi desteklemelerine ve en önemlisi de öğrenmeyi geliştirmelerine rağmen, ÖYS'lerin dil sınıflarında kullanımıyla ilgili literatürde çok az sayıda çalışma vardır.

Ayrıca, ÖYS'lerin lisans seviyesindeki büyük sınıflardaki etkisini inceleyen çalışmalar bulunmasına rağmen, küçük gruplardan oluşan dil sınıflarına dair herhangi bir çalışma bulunmamıştır. Özellikle ÖYS'lerin kelime öğrenimine etkisi az çalışılmış bir konudur. ÖYS çalışmaları daha çok kalabalık öğrenci gruplarından oluşan lisans seviyesindeki işletme, fizik, kimya ve psikoloji derslerindeki öğrencilerin tutumlarını anlamaya yöneliktir (Arnesen, Sivetsen Korpas, Hennissen, & Birger Stav, 2013; Auras, Bali, & Bix, 2010; Chan, Brown, Bun Chung, Hui-Jing, & Luk, 2013; Heaslip, Danovan, & Cullen, 2014; Latham & Hill, 2014).

Yabancı dil sınıflarında genellikle özgüveni yüksek ve dil becerileri daha gelişmiş olan öğrencilerin derse katılımı, öğretmenin rastgele öğrenci seçtiği durumlarda daha çoktur. Bu da, daha çekingen ve dil becerileri olarak daha zayıf

öğrencilerin zaman içinde daha da pasif kalmalarına yol açar. Hâlbuki ÖYS her öğrenciye eşit katılım şansı ve bireysel olarak geribildirim alma hakkı sunar. Bu durum öğretmenin gönüllüler arasından ya da rastgele öğrenci seçerek cevapları kontrol ettiği öğretmen-merkezli dil sınıflarından çok farklıdır. Hedgcock ve Rouwenhorst (2014)'a göre ÖYS sayesinde geribildirim çok daha anlamlı ve kapsamlı olabilir. Dahası, ÖYS sayesinde her öğrencinin geribildirim alma şansı olması, çekingenlik, düşük özgüven ve pasiflik gösteren öğrencilerin öğrenmeleri üzerinde daha fazla sorumluluk almalarını ve böylece sınıf içinde daha aktif olmalarını sağlayabilir.

Öğrencilerin katılımının pedagojik yaklaşımlardan dolayı düşük olduğu sınıflarda, motivasyonlarını arttırıcı bir araç olan teknolojinin de bulunmayışı, öğrencilerin derse katılımını iyiden iyiye düşürmektedir. Öyle ki, Shaver (2010)'a göre öğrenci motivasyonunu, özgüvenini, hevesini ve böylece performansını arttırmak için, öğrencilerin aktivitelere aktif katılımı önemli bir rol oynamaktadır. ÖYS uygun bir pedagojik yaklaşımla temellendirildiğinde, böylesi öğretmen-merkezli bir öğretim ortamını daha işbirlikçi bir ortama dönüştürebilir. Troussas, Virvou ve Alepis (2014)'e göre mobil teknolojiler, işbirlikçi modellerle birlikte kullanılmak için fazlaca seçenek sunmaktadır. ÖYS'nin işbirlikçi bir modelle gelmediğini, tamamıyla öğretmenin tercihlerine ve tasarımına göre işbirlikçi bir şekilde kullanılabileceğini vurgulamak gerekir. Mayer ve diğerleri (2009) ve Petersohn (2008)'un da belirttikleri gibi aslolan teknoloji değil uygulanış şeklidir.

İngilizce öğretimi alanındaki teknoloji çalışmaları 30 yıldan öncesine Bilgisayar Destekli Dil Öğretimi (CALL) adı altında uzansa da, son yıllarda mobil teknolojilerin hız kazanması ve çok kolay erişilebilir olmasıyla bu alandaki çalışmalar Mobil Destekli Dil Öğrenimi (MALL) kategorisinde incelenmektedir. Trendler zaman içerisinde değişse de bu alanda değişmeyen şey her zaman teknolojinin nasıl anlamlı bir şekilde öğrenme sürecinde kullanılabileceğidir (Motteram ve Sharma, 2009). Ayrıca Li ve Ni (2011)'ye göre yeniçağda, yabancı dil öğretmenlerinin dijital içerik geliştirebilmek ve teknolojiyi uygun bir şekilde uyarlayabilmek için bilgisayar okuryazarı olmaları bir zorunluluk olmuştur. Bu bağlamda, yeni paradigmalara uygun, teknoloji entegrasyonuna uygun bir çerçeve sunan Teknolojik-Pedagojik-Alan bilgisi (TPACK) gibi yeni modeller geliştirilmektedir (Mishra ve Koehler, 2006).

ÖYS literatüründe, ÖYS kullanımının birçok açıdan öğrenciler üzerinde olumlu bir etki yarattığı bulunmuştur. Bu çalışmalar, akademik başarı, derse katılım ve aktif rol alma, kritik düşünme becerilerinde gelişim şeklinde sıralanabilir (Conoley, Moore, Croom, & Flowers, 2006; Fies, 2005; Montplaisir, 2003). Ayrıca ilgili literatürde, öğrencilerin kendilerini "deşifre etmek zorunda olmadan" sorularına cevap alabildikleri için, ÖYS'yi özellikle benimsedikleri belirtilmiştir (Latham ve Hill, 2014). Kaiser ve Wisniewski (2012) çalışmalarında ÖYS'nin daha çok akademik başarısı daha yüksek olan öğrencilere yardımcı olduklarını göstermişlerdir. Heaslip, Danovan ve Cullen (2014) çalışmalarında ÖYS kullanılan sınıflarda daha fazla eğlence, aktif katılım ve hoşnutluk elde edildiğini bulmuşlardır.

Öte yandan literatürde yer alan bazı çalışmalar ÖYS'nin olumsuz etkiler yarattığını ya da beklenen olumlu etkiyi yaratmadığını ortaya çıkarmıştır. Keough (2012)'a göre büyüyen ÖYS literatürü, ÖYS'nin eğitim alanındaki etkinliğini açıklamamaktadır. Öte yandan, Lyubartseva (2013) çalışmasında ÖYS'nin olumlu etkiler yaratması için öğretmenin öğrencilerine bu aracın hangi amaçla kullanıldığını açıklaması gerektiğini ifade etmiştir. Bu bağlamda Nielsen, Helsen, ve Stav (2012), teknolojinin sadece kullanılmış olmak için kullanıldığında olası gelişmeyi de engellediğini bulmuşlardır. Draper (2002) de bu bulguyu destekleyerek ÖYS'nin sadece kullanılmış olmak için kullanıldığında öğrenciler üzerinde olumsuz etki yarattığını ortaya çıkartmıştır. Bir başka çalışmada Reay, Li ve Bao (2008), eğer düzgün şekilde kontrol edilmezse, ÖYS'nin sınıf içi öğretim zamanını israf edeceğini ifade etmişlerdir. Ayrıca, Gray ve Steer (2012)'in ÖYS'nin öğrencilerin akademik başarıları üzerindeki etkisini inceleyen çalışmaları da literatürün genelinin aksine olumsuz olarak sonuçlanmıştır. Son olarak Cardoso (2011), yabancı dil sınıfları için büyük bir potansiyele sahip olmasına rağmen, ÖYS teknolojisinin bu sınıflarda nadiren kullanıldığını ve bunun da literatürde ciddi bir boşluk meydana getirdiğini belirtmiştir.

Yapılandırmacı yaklaşımı destekler bir anlayışla, Agbatogun (2012)'a göre bir yabancı dil en iyi şekilde etkileşime geçerek ve hedef dildeki yapıları uygulayarak öğrenilir. Yapılandırmacı yaklaşıma uygun olarak birçok model geliştirilmiştir. Long ve Porter (1985)'in buldukları işbirlikçi öğrenim de bunlardan biridir. Bu bağlamda, yapılandırmacı yaklaşım ve işbirlikçi öğrenim anlayışına uygun modeller

incelendiğinde, diğer ÖYS çalışmalarının çoğunda kullanılan Mazur tarafından 1997'de geliştirilen Akran Öğretimi (Peer Instruction) modeli yerine, Lyman (1981)'ın bulduğu Düşün-Eşleş-Paylaş modeli bu çalışmada tercih edilmiştir. Bu modele göre, öğrenmenin merkezinde daha çok öğrenciler yer alır ve bu da aktivitelere katılmaları için daha fazla fırsatları olmaları anlamına gelir. Ayrıca bu model uygulandığında, öğrencilere "bekleme ve düşünme zamanı" verilir. Bu da öğrencilerin daha eleştirel ve derin düşünmelerine fırsat sağlar. Bu model temel olarak 3 adımdan oluşur. İlk olarak düşün aşamasında, öğretmenin sorduğu soruyu bütün öğrenciler bireysel olarak cevaplarını bulacak şekilde düşünürler. Öğrencilere verilen bu düşünme süresi çoğu zaman öğretmenler tarafından göz ardı edildiği için, aktivitelere genellikle daha hazır ve güçlü öğrenciler dâhil olmaktadır. Fakat bu model, bu eksikliği gidermektedir. İkinci aşamada, öğrenciler farklı yöntemlerle bir başka öğrenciyle eşleşir ve kendi buldukları cevapları partnerleriyle tartışarak, farklı cevaplar olması durumunda birbirlerini ikna etmeye çalışarak ya da aynı cevaplar olması durumunda kendi mantıklarını açıklayarak ortak bir yanıta ulaşırlar. Öğrenciler bu süreçte ikinci kez cevap üzerine düşünmüş olurlar. Ayrıca yabancı dil sınıflarında eşler birbirlerini dinlerken, soru sorarken, fikirlerini ifade ederken, özetlerken ya da yorumlarken ayrıca dilbilimsel egzersiz yaparlar. Üçüncü ve son aşamada, partnerlerin cevapları sınıfla paylaşılır. Geleneksel sınıflarda bu durumda bir ya da birkaç eşten sözlü olarak cevap alınırken, farklı yöntemlerle görseller aracılığıyla da cevaplar paylaşılabilir. Bu noktaya kadar en az 2 kez düşünme ve kendilerini ifade etme fırsatları olduğu için, öğrenciler bu aşamada cevaplarını paylaşırken daha rahat ve özgüvenli hissederler.

Bu model yabancı dil sınıflarında fazlaca kullanılmakta ve yabancı dil öğrencilerinin öz güvenlerini, motivasyonlarını, derse katılımlarını, konuşma becerilerini, akademik başarılarını, doğru kelime kullanma ve yazma becerilerini geliştirdiğini ortaya çıkaran birçok çalışma bulunmaktadır (McKeachie & Svinicki, 2006; Baleghizadeh, 2010; Jebur, Jasim, & Jaboori, 2012; Fitzgerald, 2013).

Bu çalışmada, orijinal Düşün-Eşleş-Paylaş modelinin bir varyasyonu olan Düşün-Eşleş-ÖYS şeklinde adlandırılan özgün bir dizayn kullanılmıştır. Bu model ve orijinal model arasındaki en temel fark orijinal modeldeki paylaş aşamasının, özgün dizaynda ÖYS tarafından bütün eşler tarafından yapılıyor olmasıdır.

ÖYS kullanımının yabancı dil sınıfı öğrencilerinin kelime öğrenimlerine bir etkisi olup olmadığının ve yabancı dil öğrencilerinin ve öğretmenlerinin ÖYS hakkındaki tutumlarının incelendiği bu çalışmada, karma yöntem uygulanmıştır.

Çalışma kapsamındaki okulda, eğitim öğretim dili İngilizce olduğu için bütün dil becerileri eşit derecede vurgulanmakta, öğretilmekte ve değerlendirilmektedir. Bu çalışmanın bu kurumda yapılmasının tek ve en büyük sebebi ise araştırmacının tam zamanlı olarak bu kurumda görev yapıyor olmasıdır.

Bu çalışmaya 154 öğrenci ve 7 okutman katılmıştır. Mevcut dönemde çalışmanın yürütülebileceği sadece orta ve ileri-orta sınıfları olduğu için öğrencilerin tamamı bu 2 seviyedeki sınıflarda yer almaktadırlar. Öğrenciler, eğitim, sosyal ve idari bilimler, mimarlık ve mühendislik fakültelerine kayıtlıydılar.

Çalışmada yer alacak okutmanlar belirlenirken, tüm okutmanlara atılan e-postalara ilk yanıt verenler arasından, partneriyle birlikte çalışmada yer almak isteyen okutmanlarda karar kılınmıştır. 4 okutman 2 tane orta seviye sınıflardan sorumluyken, diğer 3 okutman da yine 2 tane ileri-orta seviye sınıfı paylaşmaktaydılar. Okutmanların öğretmenlik tecrübesi 2 ila 19 yıl arasında değişmekteydi. Tüm okutmanlar bu çalışma yapılmadan önce en az 1 eğitim-öğretim dönemini aynı kurumda geçirmişlerdi; yani, kurumsal düzenlemelere, partnerlerine ve öğrenci profiline aşinaydılar. Okutmanların lisans dereceleri Dilbilim, İngiliz Dili ve Edebiyatı ve İngilizce Öğretmenliği şeklindeydi. Okutmanlardan biri Kanada doğumluydu ve lisans derecesi öğretmenlik üzerinde değildi. Öğretmenlik yeterliğini Yabancılara İngilizce Öğretimi (TEFL) programından aldığı sertifikayla kazanmıştır. Okutmanların 2'si erkek, diğer 5'i de bayandı. Çalışmanın tamamında gerçek adları yerine takma isimlerle yer almışlardır.

Çalışmada kullanılan ders kitabı National Geographic Learning tarafından sunulan Pathways serisidir. Orta seviye sınıflarda serinin 2., ileri-orta seviye sınıflarda ise 3. Kitabı kullanılmıştır. Her kitap 10 üniteden oluşsa da, müfredatın gerektirdiği kazanımları sağlamayan üniteler programdan çıkarılmış ve bu değişiklik belirtilmiştir. Kalan üniteler arasından, çalışmada kullanılan ünitelerin adları yine belirtilmiştir.

Çalışmanın verisi 5 farklı ölçek kullanılarak toplanmıştır. (a) Demografik testi, (b) Kelime testleri, (c) ÖYS algı anketi, (d) öğrencilerle yarı yapılandırılmış görüşme ve (e) okutmanlarla yarı yapılandırılmış görüşme. Demografik testinde katılımcılara

cinsiyetleri, kayıtlı oldukları fakülteler, İngilizce seviyeleri ve eğitsel araçlara dair ilgi ve tecrübeleri soruldu. Kelime testleri ise araştırmacı tarafından, kitap setinin sağladığı soru bankası kaynağı kullanılarak hazırlandı. Her iki seviye için hazırlanan çoktan seçmeli testlerin her birinde 20 adet soru bulunmaktaydı. Hazırlanan kelime testleri uygulanmadan önce pilot çalışma yapıldı. Çalışmanın son safhasında hem 6 hafta boyunca ÖYS kullanmış çalışma gruplarına hem de ÖYS kullanmayan rastgele seçilmiş kontrol gruplarına uygulanmış, sonuçlar arasındaki farklar incelenmiştir. ÖYS algı anketi beşli likert ölçeği kullanarak 26 maddede ÖYS'nin kullanılabilirliği, ÖYS'nin öğrenci etkinliğine etkisi ve ÖYS'nin öğrenme üzerine etkisi hakkında veri sağlamıştır. Richardson, Dunn, McDonald ve Oprescu (2015) tarafından geliştirilen ve güvenilirliği ispatlanmış anket üzerinde çeşitli değişiklikler yapılmıştır. Bu bağlamda bu çalışmayla direk ilgisi olmayan 5 madde çıkarılmış, yerlerine yine orijinal anketle birlikle sunulmuş alternatif maddeler arasından daha uygun olanlar eklenmiştir. Öğrenci görüşmeleri için başlangıçta çeşitli ölçütleri göz önünde bulundurarak 8 soru hazırlanmış, 23 ve 31 dakika süren iki ayrı görüşmede orta seviye ve ileri-orta seviye sınıflardan gelen dörder kişilik öğrenci gruplarına yöneltilmiştir. Okutmanlarla yapılan görüşme için de ilk etapta benzer ölçütler gözetilerek 5 soru hazırlanmıştı. Bütün okutmanların birlikte katıldığı görüşme 25 dakika sürmüştür. İki grupla yapılan üç görüşmede de, eksik olan, çalışmanın tamamına ışık tutacak, argümanları geliştireceğine ve cevap vereceğine inanılan noktalarda, araştırmacı tarafından öğrencilere ya da okutmanlara pekiştirme soruları da yöneltilmiştir. Yine hem öğrenci hem de okutman görüşmeleri hem ses kaydı hem de video kaydına alınmıştır.

ÖYS uygulanmaya başlamadan önce, katılımcı okutmanlara 3 ardışık günde, 45 dakikalık 3 oturumda eğitim verilmiştir. İlk oturumda çalışmaya dair detaylar, okutmanların sorumlulukları ve onlardan beklentiler konuşulmuştur. İkinci oturumda, Düşün-Eşleş-Paylaş modeli okutmanlara anlatılmış ve mevcut kelime teknikleriyle karşılaştırması yapılmıştır. Son oturumda ise çalışmada kullanılacak olan ÖYS okutmanlara tanıtılmış ve anlatılmıştır. Bu oturumda hem Düşün-Eşleş-Paylaş modeline ÖYS'nin nasıl entegre edileceği, hem de özellikleri detaylı bir şekilde incelenmiş ve bütün okutmanların uygulama yapması istenmiştir.

Sonraki 6 hafta boyunca onay formunu imzalamalarının ardından, çalışma gruplarında ÖYS kelime aktivitelerinde Düşün-Eşleş-Paylaş tekniğiyle kullanılmıştır.

6. haftanın sonunda, toplamdaki 4 çalışma grubunun yanı sıra rastgele seçilen 4 kontrol grubuna kendi seviyelerindeki kelime testi verilmiştir. Aynı hafta, çalışma grubundaki öğrencilere ÖYS algı anketi uygulanmıştır. Çalışmanın son safhasında, önce orta ve ileri-orta seviye çalışma sınıflarından gönüllü olan dörder öğrenciyle ayrı gruplar halinde ve son olarak da bütün okutmanlarla tek grup halinde görüşülmüştür. Bütün katılımcıların kimlikleri çalışma boyunca gizli tutulmuş, gerektiğinde takma isimler kullanılmıştır.

Nicel veri sağlayan kelime testi ve ÖYS algı anketi IBM SPSS 20 yazılımı kullanılarak incelenmiştir. Kâğıt-kalem olarak uygulanan kelime testi sonuçları, sisteme elle girilmiş ve sonuca erişmeden önce bir takım testlere tabi tutulmuştur. Öncelikle parametrik ya da parametre dışı testlerden hangisinin uygulanacağının belirlenmesi için, ham veriye öncelikle normallik testi uygulandı. Kolmogorow-Smirnow normallik testi sonuçlarına göre parametre dışı bir test uygulanması gerektiği görüldü. Mann-Whitney *U* testi, kelime testinin sonuçlarının karşılaştırıldığı testtir. ÖYS algı anketi SPSS üzerinde çapraz tablo formatında tanımlayıcı analize konu olmuştur.

Nitel veri öğrenci ve okutmanlarla yapılan görüşmelerle toplanmıştır. Verinin çözümlemesinde temellendirilmiş teori (Grounded Theory) ilkeleri uygulanmıştır. Fraenkel, Wallen ve Hyun (2012)'un da belirttikleri gibi "temellendirilmiş teoriler çalışmadan önce oluşturulmaz, tümevarımsal şekilde çalışma boyunca toplanan veri üzerinden oluşturulurlar" (p. 433). Görüşmelerde toplanan verilerin derinlemesine analizi sırasında, öğrenci ve okutmanlarda dörder tema belirlendi. Öğrencilerin cevapları (a) oyunlaştırma ve etkinlik, (b) geribildirim, (c) gizlilik ve (d) diğer bakış açıları şeklinde gruplandırıldı. Okutmanlarla yapılan görüşmede ortaya çıkan ortak konular ise (a) etkinlik, (b) geribildirim, (c) işbirliği ve yarışma ve (d) isteksiz öğrenciler şeklinde 4 başlıkta toplandı.

Öte yandan, bu çalışmayla ilgili çeşitli kısıtlamalar da söz konusu. Öncelikle, araştırmacının kontrolü dışındaki faktörlerden dolayı, çalışma grupları rasgele örneklem kullanılarak oluşturulamamıştır. Ayrıca, ÖYS teknolojisinin önceden belirlenmiş bir pedagojiyle kullanılması planlanmışsa da okutmanlar tarafından sınıf içi kullanımda bir takım farklı uygulamalar gerçekleşmiş olabilir. Buna bağlı olarak, uygulama etkisi (implementation threat) söz konusu olabilir. Aynı şekilde, Hawthorne

etkisinin bu çalışmanın sonuçları üzerinde etkisi olmuş olabilir. Fakat ÖYS aracının yarattığı yenilik etkisini engellemek mümkün olamazdı. Bu durumda hem okutmanlar hem de öğrenciler ÖYS lehine taraflı olmuş olabilirler. Bu da öğrencilerden toplanan nicel verilere yansımış olabilir. Ayrıca, bu çalışma zamana bağlı kısıtlamalardan dolayı, yalnızca bir özel üniversitede 4 farklı çalışma grubuyla yürütüldü. Bu nedenle, bulgular bütün popülasyonun temsilcisi olmayabilir. Fakat asıl amaç gelişmekte olan ÖYS literatürüne katkına bulunmak olarak değerlendirildiği için, bu durum aslında bir problem olarak görülmeyebilir.

Kelime testinin sonuçlarına göre çalışma grupları ve kontrol grupları arasındaki farklar hem orta seviye, hem de ileri-orta seviye sınıflarında istatistiksel olarak anlamlıdır. İleri-orta seviye sınıflarının sonuçları arasındaki fark, orta seviye sınıflarına göre daha büyük olsa da, tüm çalışma gruplarının kontrol gruplarıyla karşılaştırılmalarından ortaya çıkan sonuç en büyük farkı göstermektedir.

ÖYS algı anketi sonuçları da ÖYS'nin kullanılabilirliği, ÖYS'nin öğrenci etkinliğine etkisi ve ÖYS'nin öğrenme üzerine etkisi başlıkları üzerinden incelenmiştir. Kullanılabilirlikle ilgili soruların tamamına büyük oranda olumlu cevaplar verilmiş olsa da yalnızca ÖYS kullanımının zaman kaybına yol açtığını düşünen öğrencilerin oranı düşünmeyenlerden daha fazla olmuştur. ÖYS'nin öğrenci etkinliğine etkisini ölçen maddeler de genellikle yüksek sayıda oy almışlardır. Fakat ankete cevap veren öğrencilerin yarısından fazlası ÖYS kullanımında teknik aksaklıklar yaşadıklarını belirtmişlerdir. Son olarak katılımcılardan ciddi bir orandaki çoğunluk ÖYS kullanılan derslerden daha fazla keyif aldıklarını ve ÖYS'nin onlara sağladığı gizlilik özelliğinin faydalı olduğunu belirtmişlerdir. Fakat katılımcıların yarıya yakını cep telefonu kullanımının ve sınıftaki arkadaşlarının cep telefonu kullanımının kendileri için dikkat dağınıklığı sebebi olduğunu ve cep telefonlarını eğitsel bir amaçla kullanmaktan hoşlanmadıklarını belirtmişlerdir.

Bu çalışmada, ilgili konularda gelecekte yapılacak çalışmalara ışık tutacak öneriler sunulmuştur. Bu önerilerden bazıları, mevcut çalışmanın tekrarlanması ve bulguların karşılaştırılması; aynı modelin daha uzun süre uygulanarak bu şekilde öğrenilen kelimelerin akılda kalıcılığının, aynı araç ve pedagojinin diğer dil becerilerinin öğreniminde kullanılması; aynı pedagojinin yaşları veya İngilizce seviyesi açısından farklı olan gruplarla kullanılması ve etkisinin incelenmesi, farklı

ÖYS araçlarının aynı pedagojiyle kullanılması ve farklı taşınabilir araçların bu çalışmada kullanılan pedagojiyle uygulanıp sonuçlarının karşılaştırılması önerilmiştir.

Son olarak uygulayıcılara da önerilerde bulunulmuştur. Bu çalışmanın sonucuna göre, uygulanan modelin kelime öğreniminde olumlu etkisi olduğu bulunmuştur. Bu sebeple, uygulanan pedagojik yaklaşım, aynı seviyelerdeki yabancı dil sınıflarında kullanılabilir. Çalışmanın bir diğer sonucuna göre, öğretmenlerin bu araçla ilgili tecrübeleri arttıkça daha etkili şekilde kullanmışlardır. Bu sebeple, bu model hizmet öncesi eğitim programlarının müfredatına teknoloji entegrasyonu amacıyla dâhil edilebilir.

APPENDIX I

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü ☐

Sosyal Bilimler Enstitüsü ■

Uygulamalı Matematik Enstitüsü ☐

Enformatik Enstitüsü ☐

Deniz Bilimleri Enstitüsü ☐

YAZARIN

Soyadı : Çelik
Adı : Sercan
Bölümü : Eğitim Programları ve Öğretim

TEZİN ADI (İngilizce) : Investigating the Effect of Student Response System Supported Think-Pair-Share Pedagogy on Preparatory School EFL Students' Vocabulary Achievement

TEZİN TÜRÜ : Yüksek Lisans ■ Doktora ☐

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. ■
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. ☐

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: