



**HACETTEPE ÜNİVERSİTESİ**  
**EĞİTİM BİLİMLERİ ENSTİTÜSÜ**

Department of Foreign Language Education  
English Language Teaching Program

TECHNOLOGY UTILIZATION IN TEACHING VOCABULARY AT TERTIARY  
LEVEL

Sümevra BAĞATUR

Ph.D. Dissertation

Ankara, 2019

With leadership, research, innovation, high quality education and change,

*To the leading edge... Toward being the best...*



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ÜNİVERSİTE DÜZEYİNDE KELİME ÖĞRETİMİNDE TEKNOLOJİ KULLANIMI

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To the Graduate School of Educational Sciences,

This thesis / dissertation, prepared by **SÜMEYRA BAĞATUR** and entitled "Technology utilization in teaching vocabulary at tertiary level" has been approved as a thesis for the Degree of **Ph.D.** in the **Program of English Language Teaching** in the **Department of Foreign Languages Teaching** by the members of the Examining Committee.

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Prof. Dr. Ali Ekber ŞAHİN  
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## **Abstract**

The aim of this study is to investigate the influence of a web-based corpus (WBC) teaching on learner autonomy, e-learning readiness level, use of vocabulary learning strategies, and vocabulary size development. This study was carried out at two state universities in the province of Ankara, Turkey during the spring term of the academic year 2017-2018. The study group consisted of one control and one experimental group, all of whom were ELT Department freshman students. Having a mixed method research design, both quantitative and qualitative data collection was carried out in the current research. As for the quantitative data, at the beginning and at the end of the study surveys of learner autonomy, e-learning readiness level, the use of vocabulary learning strategies and vocabulary size tests were administered to both groups. As for the qualitative data collection, semi-structured interviews were carried out with 9 control group students (5 males and 4 females) and 8 experimental group students (4 males and 4 females) from each group. The quantitative analysis of the dataset was conducted through the use of Multivariate Analysis of Variance/Covariance (MANOVA & MANCOVA) and Mixed Between-Within Subjects Analysis of Variance, while for the qualitative data, content analysis technique was run. The quantitative analysis yielded that there was no statistically significant difference between the groups' scores. Lack of motivation, classroom teaching practices, time management issues were some of the points the interviewees highlighted in regard to their achievement.

**Keywords:** web-based corpus, learner autonomy, e-learning readiness, vocabulary learning strategies, vocabulary size, language learning

## Öz

Bu araştırmanın amacı web-tabanlı corpus (WTC) öğretiminin öğrenen özerkliğine, e-öğrenmeye hazırbulunuşluğa, kelime öğrenme strateji kullanımına, ve kelime dağarcığı gelişimine etkisini incelemektir. Çalışma Ankara, Türkiye’de bulunan iki devlet üniversitesinde 2017-2018 akademik yılı bahar döneminde gerçekleştirilmiştir. Çalışma grubu bir kontrol ve bir deney grubundan oluşmakta olup tüm katılımcılar İngiliz Dili Eğitimi (İDE) Bölümü birinci sınıf öğrencilerinden oluşmaktadır. Araştırma karma desenli araştırma modeline sahip olduğu için hem nicel hem de nitel veri toplamala gerçekleştirilmiştir. Nicel veri olarak, dönemin başında ve sonunda her iki çalışma grubuna da öğrenen özerkliği, e-öğrenmeye hazırbulunuşluk, kelime öğrenme stratejileri kullanımı ve kelime dağarcığı entstürmanları verilmiştir. Nitel veri içinse kontrol grubundan 9 öğrenci (5 erkek, 4 kız), deney grubundan 8 öğrenci (4 kız, 4 erkek) ile yarı-yapılandırılmış görüşmeler gerçekleştirilmiştir. Nicel veri analizi için Çoklu Varyans/Kovaryans Analizi (MANOVA & MANCOVA) ve Tekrarlayan Ölçümlerde Grup İçi ve Gruplararası Varyans Analizi testleri uygulanırken, nitel veri analizi içinse içerik çözümlemesi gerçekleştirilmiştir. Nicel veri analizi istatistiksel olarak kontrol ve deney grubu öntest ve sontest arasında herhangi bir anlamlı değişiklik vermemiştir. Motivasyon düşüklüğü, sınıfiçi öğretim uygulamaları, zaman yönetimi sıkıntıları görüşme gerçekleştirilen öğrencilerin başarıları ile ilgili bahsettikleri noktalar arasında yer alıyor.

**Anahtar sözcükler:** web-tabanlı corpus, öğrenen özerkliği, e-öğrenmeye hazırbulunuşluk, kelime öğrenme stratejileri, kelime dağarcığı, dil öğrenimi

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## Symbols and Abbreviations

**BELS:** Blended e-Learning System

**BL:** Blended Learning

**BNC:** British National Corpus

**CALL:** Computer Assisted Language Learning

**CAVL:** Computer Assisted Vocabulary Learning

**COCA:** Contemporary Corpus of American English

**ELT:** English Language Teaching

**ESP:** English for Specific Purposes

**FLE/SLE:** Foreign/Second Language Education

**HEC:** Higher Education Council

**LC:** Lexical Competence

**L2:** Second/Foreign Language

**LS:** Learning Strategies

**MANOVA:** Multivariate Analysis of Variance

**MANCOVA:** Multivariate Analysis of Covariance

**MEM:** Memory Strategies

**MICASE:** Michigan Corpus of Academic Spoken English

**MoNE:** Ministry of National Education

**MSS:** Memory Strategies Scale

**SLA:** Second Language Acquisition

**SLE:** Second Language Education

**VLS:** Vocabulary Learning Strategies

**WBC:** Web-Based Corpus

## **Chapter 1**

### **Introduction**

This study aims to examine the influence of a web-based Corpus use in second language learning on the development of learner autonomy, e-learning readiness level, use of the vocabulary learning strategies (henceforth VLS) and the development of vocabulary size of the language students. The aim of the study is to shed some new light to the student perceptions of these variables in relation to technology use in their language learning process. This introductory chapter spreads in five subtitles: Firstly, a general background to computer assisted language learning (henceforth CALL) with the specification of web-based Corpus (henceforth WBC) in language teaching will be presented. Following that, the statement of the problem, rationale of the study, significance of the study and research questions to be answered will be given respectively. The chapter proceeds with the limitations of the study, and finally, it will conclude with the definitions of the terms for the readability of the study.

### **Background of the Study**

Through its history, education has ceaselessly been evolving toward greater inclusion. Several centuries ago, education was almost exclusively provided for male children of the wealthy. Parallel to developments in other domains of the human civilization, education became extended to others. Along with civil rights, feminist, multicultural movements and other advancements such as advocacy for rights of the handicapped individuals and those of other underprivileged and oppressed populations education is a service provided for every person in any given democratic society. Furthermore, today's education is not only inclusive of all persons from various demographic strata but it is also mindful of a variety of individual differences such as differences in ability, health, temperament, cultural background, learning styles, sensory processing and many other individual and group characteristics. Hence, education in the 21<sup>st</sup> Century strives toward tailoring learning experiences according to individual differences in such diverse ways as to facilitate optimal actualization of students' potentials.

Being the lingua franca of the present era, English language has gained more importance over the time. In this respect, the present age is witnessing

hundreds of thousands people appearing in the realm of English language teaching and learning process. This phenomenon has grown so immensely over the years that a vast body of empirical work has been carried out to shed light on the efforts toward providing the learners with a more effective learning experience during the course of language learning in all educational contexts. In this regard, opportunities and facilities provided by the technology itself and how to embed the technology into the education programs to the language learning have recently been on the scope of the educators and researchers as well as in the publication houses. CALL has emerged out of such technological developments as a means to contribute to second language education. By its very origin it aims to reinforce and promote language learning as oppose to the impractical conducts of second language education.

It goes without doubt that new generations of students are having an “online age” in an infinite number of mine ports in the “goldmine” (Chinnery; 2014, pp. 3) of the Internet which has become an inseparable part of their education as well as their everyday lives. In this sense, being a multilayered process, second language learning also takes great advantage of CALL. The literature bears a variety of studies worked on the tech-use during Foreign Language Education/Second Language Education (henceforth FLE/SLE), however, during my research I have come up that there is no study that also investigates the e-learning readiness level of the learners while they check the tech-use in their educational settings. In that regard, this study bears hope to contribute to the literature in relation to taking e-learning readiness level of the students into account.

Related literature bears many studies on autonomy in educational contexts from different perspectives in relation to technological advancements. A number of recent researches (Chinnery; 2014; Chapelle, 2007; Ma, 2013; Tsai, 2019; Beyene-Segni & Davidson, 2019, Gruba & Chau-Nguyen, 2019; Daley, Watkins, Wall-Williams, Courtenay, Davis & Dymock, 2001; Tseng, S.-S. & Yeh, H.-C., 2019; Çelik, 2013; Arno-Macia, 2012; Saade, Büyükkurt & Alkhori, 2011; Hong & Samimy, 2010) have been conducted in seek of finding new paths to promote language learners’ performance by means of technology. In this regard, technology has been one of the outstanding means that fittingly serves this aim. Autonomy and technology use in the language learning classrooms has, therefore, been under vehement scrutinize in the field (Smith, 2005; Lee, 2011; Levy, 2002;

Antoniou, 2012; Darasawang, 2007; Jitpaisarnwattana, 2018; Prince, 2011; Arıkan & Bakla, 2011; Monteverde & Gaona, 2011; Ezza, 2014; White, 2008; Dias, 2000; Murase, 2009; Levy, 2000; Al-Mahrooqi & Naqvi, 2014). Being the requirement for taking responsibility in their learning experience, learner autonomy requires a self-driven spot in which learners actively make use of for their own learning.

These studies also report that the integration of technology plays a significant role in developing basic language skills of reading, writing, listening and speaking in a more effective way. To improve such linguistic skills further, a true mastery of word knowledge is one of the indispensable requirements that have to be achieved by the learners. In that regard, amongst the uses of computational technologies in second language education has received the most attention corpus linguistics. Corpus linguistics is a vein of study mainly focused on the written version of any original body of texts, called *corpus*. In the technological terms, the compilation of the real word uses provides one with an immense body of words ready to be picked by its use while learning a new word or phrase. Recent literature has been witnessing a focus on the practical benefits of corpora use in the process of second language education.

Kennedy (1998) makes a point about the merits of computerized corpus linguistics in the sense that “digital facilitation of the corpora gave linguistic studies a more scientific stance with more mathematized and measured aspects of the language in regard to its accuracy and measurability”, (p. 5) which is also essential across all scientific disciplines. In support of him, Conrad (2000), in her review of the recent developments in the corpus linguistics research, emphasizes the empirical aspect of the digitalized corpus studies with numerous collections of original language outputs (p. 548). This study, in that regard, has been in an effort to provide insights about the use of WBC for vocabulary learning.

Apart from the use of WBC, vocabulary learning strategies are also the eminent part of this study by embodying the memory strategies used during learning a new word. Vocabulary learning strategies have been extensively studied within the body of vocabulary learning and the essential help of the use of these strategies have been evident in many recent studies (Connor, Day, Zargar, Wood, Taylor, Jones & Hwang 2019; Suliman, 2019; Chai & Welz, 2019; Gibb & Li, 2019; Griffiths, 2019; Tsai, 2019; Madya, Triastuti, Ciptaningrum & Hermasari, 2019; Liu, Huang & Chien, 2019; Lin & Lin, 2019). However, the primary concern

of this study is to uncover the effect of the use of WBC programme on the development of learner autonomy, e-learning readiness level, the use of vocabulary learning strategies and vocabulary size of the students. In this respect, the more learners are exposed to the language in a variety of channels, the more the comprehensible input they build (Krashen, 1982) to pursue the skills. In the same vein, technology is fast becoming a key instrument in the realm of educational entities ranging from the learner to the counselor, from the programme developer to the administrator with an immense number of opportunities to actualize the purpose of language learning. Recent advancements in technology have been helpful for us to understand how the scope of language education can be multidimensional with numerous educational opportunities which bring about a more effective teaching and learning outcome. Therefore, this research is an attempt to provide a body of insights into the impact of the technology supported language learning environment on the development of learner autonomy, e-learning readiness level, the use of vocabulary learning strategies and vocabulary improvement.

### **Statement of the Problem**

Recent developments in educational technologies have heightened the need for a more in depth analysis of the situation. Despite the upsurge in these developments, there still appears to be a shortage of literature involving empirical work on the implementation of technology into the language programs. Supportingly, Knagg (2013) notes that there has been a “relatively little discussion and writing about the principles that should be applied in blending elements which use technology with more traditional face-to-face teaching in the same course” (p. 3).

Singh and Reed (2001) pinpoint that “early experience with these technologies has uncovered opportunities for profound improvements in quality, effectiveness, convenience and cost of learning experiences” and continue that “only now are we beginning to understand how learning experiences will evolve to exploit ‘blended’ combinations of both traditional and technology-based learning methods, and how blended learning can have a strategic impact on critical business processes” (p. 1).

At the present time, the need for further implementation of technology into the language courses seems to be a crucial issue in language education programs. Westbrook (2008, p. 14) agrees that there is a “huge deficit in the field for conducting the technologies to the educational settings or the small language institutions”. Similarly, Lian (2000) notes that investigation of a technology-enhanced environment for the actualization of learning has often been neglected. Therefore, there is a pivotal need for finely-tuned language learning programs incorporating the use of cutting edge technologies as well as studies examining the effectiveness of such programs.

With the rapid advances in technology across the world, people especially the youth have a tremendously sharp shift towards a learning style which bears more and more technology than it used to in the past. In this sense, language learning cannot be regarded as an entity on its own, but rather as a phenomenon which also involves the integration of the teaching-learning processes with the effective uses of technologies.

To date, studies have consistently demonstrated that any degree of technology use with traditional classroom learning significantly improves a host of learning outcomes such as learner self-efficacy (Lynch & Dembo, 2004; Orhan, 2007), self-directed learning strategies (Johnson & Marsh, 2014; Hess et al., 2016), learners’ performance anxiety (Aldalalah et al., 2014; Johnson, 2014), tolerance of ambiguity (Erten & Topkaya, 2009; Olejarczuk, 2014), just to name a few. This study is an attempt to show how the technology use in language learning influence the level of learner autonomy, e-learning readiness, use of vocabulary learning strategies and also vocabulary size of the students.

The issue has grown in importance in light of recent evidence reported in a considerable amount of literature. In that respect, Bang (2011) in her review criticizes the field that there exist a vast number of quantitative researches, which creates a need for more qualitative research on this regard. Therefore, employing an embedded mixed method design, this study has been conducted in the hope that it will provide some insight to the integration of technology in second language teaching environments.

Learning styles and strategies have been emphasized in the realm of second language acquisition (henceforth SLA) that they play a crucial role in the success and failure of students in any kind of linguistic competence. To date, the

competences for successful students are rather than being passive receivers are more focused on their taking active part in their learning process with a more engaged status, knowing of their own skills and more importantly learning how to learn. Supportingly, if we are specifically talking about learning and retaining of new words in a second language the significance of learning styles and strategies becomes more evident. In this regard, vocabulary learning strategies and their use need to be scrutinized to contribute to the field. The technological developments not only transformed the way language is taught through CALL but also the learners' ways to learn. Learners are becoming scouts in their learning process and therefore take a lead in finding their way to the information with the means of technological innovations. At the heart of this study lies WBC use in a vocabulary course and to examine the outcomes one of which is the vocabulary size development check. It is hypothesized that vocabulary development is also enabled by means of WBC. In this respect, little is known about the influence of technology on learner autonomy and it is not clear yet what factors really influence it. This indicates a need to understand various perceptions of learner autonomy development in language learners.

This dissertation aims to unravel the perceptions of language learners towards technology use on their development of learner autonomy as well as on the e-learning readiness, use of VLS and vocabulary size development. It also systematically reviews the data for exploring these queries before and after the treatment to investigate the change, if any, at any construct being measured.

### **Rationale of the Study**

During my doctoral readings, I was always taken aback by how creative the conduct of SLE can get in the hands of the teachers with an eager group of learners. Along the years of SLE, literature bears many methods and techniques for facilitating the whole process for both the teachers and the learners. All these methods and techniques differ in their application emphasizing that one point in common: there is no best method for all; it is just a matter of group dynamics and the teacher that determine the best method for each group of learners. Similarly, technology is also a means that is supposed to help us in the process of SLE and there is no "best for all" way for us to benefit. In line with that, we are the ones who

will choose and conduct the teaching process as language teachers. Just like for the ill practices of teaching approaches and methods, literature is also full of examples that find out that there occur to be dramatically impractical conducts of teaching that turns out to be rather debilitating at the end of the teaching process. Literature also tells us how beneficial technology can get to serve to our educational aims if it is properly and appropriately integrated to the teaching programme. I noticed that there has been a growing body of research on the use of technology in SLE in regard to the e-learning readiness level of the learners. Without checking whether the students are ready or how ready they are, an integration of a tech-based, web-based language instruction may not yield fruitful results. It is also at the outset of this research that students to be measured on their autonomy levels, as well as their use of VLS and vocabulary size development. A closer look into all these attributes at once of the learners would be contributory to the field. In this respect, this study would bear to hope for contributing to the literature in the assets covered and provide some insight and incentive for the further studies.

### **Significance of the Study**

There are several important areas where this study makes an original contribution to: first, it engages the reader with the current situation of the SLE learners and their educational setting in the sense that technology is not a luxury to enjoy but rather becoming a need and a vital part of our daily lives as well as our educational setting. Despite the growing body of related evidence in the literature, the relationship of language learners and technology still remains to be inconclusive; so much uncertainty still exists about the relation of the two. In that respect, this research critically traces how the learners connect to technology in a Vocabulary course and what changes occur at the end of the treatment.

Secondly, this study seems to be the only one that takes the level of e-learning readiness into consideration while investigating the relation of technology use and learner autonomy. Though no previous study has investigated the e-learning readiness with the measure of technology use, it is of great significance in that a much efficient educational teaching can be tailored for the students just by knowing about their e-learning readiness level which will also be cost effective in



many respects in their educational programme. Apart from presenting originality by measuring e-learning readiness at the outset of the research, this study also tests the effectiveness of a technology-enhanced programme by utilizing a WBC teaching method. The WBC is utilized to test the efficiency and applicability of tech-enhanced vocabulary teaching in an English Language Teaching (henceforth ELT) setting. Also the use of VLS and vocabulary size are two aspects to be extensively explored within this study. Literature reviewed showed that there is not yet a study conducted investigating all these aforementioned constructs altogether which makes it a rare study of the related literature.

Thirdly, the participants of this study are ELT fresh year students at two major state universities at the capital city of Turkey. Therefore, these students are prospective teachers in the sense that they will be teaching English in three years and are supposed to be educated and well-equipped in a relatively better way for teaching profession compared to the other smaller and newly-established universities. The significance of this research also lies in the fact that these students will be outputs of such higher educational institutions representing the top level of the ELT across Turkey.

Lastly, this study aims to shine new light on the debates over the use of technology through an examination of the field in the Turkish context. In this respect, the researcher attempts to defend the view that technology has been inevitably leading us to transform and modify our educational and instructional strategies across all posts in educational domain. Despite the rapid innovations in technology, the Turkish national education has been trying to keeping up with them. Supportingly, in 2001 Ministry of National Education (henceforth MoNE) reported a study that educational needs of the 21<sup>st</sup> century should be met across all stages of education with an emphasis on the use of technology just like it is used across the developed countries. In order to achieve this goal, Turkish government has been initiating many projects to meet the new technologies with the students from all levels of education. Fatih Project, being one of the most influential and efficient projects, has been on run for the primary, secondary and high school levels. However, MoNE or Higher Education Council (henceforth HEC) have not proposed a project or programme to be applied to the university students. It is the universities that mainly determine their own teachings as the educational institutions. Therefore, this study also intends to determine the extent to which ELT

students are benefitting from technology within a set of variables like autonomy development, e-learning readiness level, use of VLS, vocabulary size development, and what perceptions they have along the process, and whether they change at the end of the process. All in all, this study centralizes use of technology in an ELT setting and tries to explore the influences of it on several measures with a host of data collection tools.

Abovementioned is presented the grounded sufficiency for the significance of this study. It is hoped to be contributory to the gap for the related literature and tempt for further studies in the future.

### **Research Questions**

This study was conducted in an effort to shed light on the role of WBC teaching in the development of learner autonomy, e-learning readiness level, use of VLS and vocabulary size. In line with this focus a number of research questions have been anticipated with the central main research question:

Does WBC teaching have an influence on the development of learner autonomy, e-learning readiness level, use of VLS and vocabulary size?

**Sub research questions.** In order to seek the answer to this question, minor research questions below were investigated:

1. Prior to the intervention, is there a statistically significant difference between the pretest scores of both control and experimental groups in terms of their levels of learner autonomy, e-learning readiness, use of VLS and vocabulary size?
2. Following the intervention, is there a statistically significant difference between the posttest scores of control and experimental groups in terms of their levels of learner autonomy, e-learning readiness, use of VLS and vocabulary size?
3. At the end of the term, does a significant change take place in participants' levels of learner autonomy, e-learning readiness level, the use of VLS and the vocabulary size?

## **Limitations of the Study**

A number of limitations of this study should be kept in mind while interpreting the findings of the study. One of them is related to its sampling in that it utilized a small group of English Language Teaching Department students at only two state universities, therefore the results of the study may not be generalizable to all English language learners in other contexts. The universities are two of the top universities in Turkey, so the findings of this research may fail to be consistent with the other universities in Turkey.

In addition, all the data collection instruments were solely self-report measures. Therefore, reliability and validity of the results are limited to the psychometric properties of the scales used in the study. The reliability of the data is solely depended upon the participants' level of sincerity in their responses to the items on the administered scales.

Another limitation of the study is the lack of instructor/lecturer views about the students in the classroom. An in depth-scrutiny of each student regarding their behavioral change and academic performance over time with each lecturer will yield more contributory results for the effectiveness of the further research.

Instructors' perceptions for the concept of autonomy are crucially integral to that of the students. That is, learner autonomy can be promoted with the autonomy awareness of the instructors. In that vein, instructors' perceptions of autonomy could also be taken into account during the research.

Also experiment and control group students had different instructors, thus the results of the study could have been different and more reliable if the lecturer was the same one.

## **Definitions**

For a better understanding of the thesis, the related terms are defined as in the following:

*Learner autonomy*: "the ability to take charge of one's own learning" (Holec, 1981).

*Learning strategy*: Specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed and more transferable to new situations. (Oxford, 1990, p. 8).

*Blended learning*: “the inclusion of e-learning elements in the design of subjects delivered using a face-to-face approach” (Gomez & Duart, 2012, p. 48)

*Corpus*: “a collection of written or spoken material stored on a computer and used to find out how language is used” (Cambridge Dictionary)

*Concordance*: A concordance is a list of contexts exemplifying a word or word family. (Nation, 2000, p. 184). It is also “*a book or document that is an alphabetical list of the words used in a book or a writer's work, with information about where the words can be found and in which sentences*” (Cambridge Dictionary)

## **Chapter 2**

### **Literature Review**

This chapter will be composed of three main parts divided into subsections. The first part of this chapter will present the emergence and evolution of CALL with a historical background of it. The second one will give various definitions of learner autonomy, the constructs it is made up by, and its historical development in the realm of foreign language education. The third part will focus on the vocabulary learning and technology use in second language education. The last part of the chapter will mainly examine the computer technologies in regard to learner autonomy and vocabulary development. The subsections of this part of the chapter will give the related works conducted in the field in regard to the influence of WBC use as a technological tool in FLE/SLE.

#### **What Is CALL?**

Within the last century, humankind has witnessed a tremendous hail of the technological innovations and applications. From the supermarkets, hospitals, companies, to stores, galleries, concerts, theatres, schools and meetings, all aspects of the human life have been rapidly transformed by the technological developments. Education, as mostly delivered to the young generation, is a realm that has also been utilizing the computer technologies for educational purposes. The continuous use of a vast number of technological advancements, social media sites, visuals and audio softwares, a multiple number of other applications and more has turned the young generation into “digital natives” (Prensky, 2001, p. 1). The Z generation of our time finds technology everywhere around them which leads to the emergence of a more competent and apt body of young people in any use of the innovative application or software programme compared to their predecessors. In this vein, students in the classrooms happen to be more agile and alert toward any use of technology during their education. They are born into the tech-tools and grow up with them around, which makes their life more surrounded with those devices and tools compared to the older generation. In this regard, technology tends to be serving for the new generation in their educational life rather than it was during their instructors’ time in the classroom. This line of

argument takes us to the importance of CALL approach in regard to second language education.

CALL is an approach practised for more than 50 years now in the realm of foreign language teaching and learning environments with the supplementary aid of the computers during the teaching and learning process (Butler-Pascoe, 2011). In Levy's (1997) words CALL is "the search for and study of applications of the computer in language teaching and learning" (p. 1). Since the emergence of CALL, which dates back to the 1950s, there has accumulated a vast body of research on the application, integration and progression (Gruba & Chau Nguyen, 2019; Hee-Hong & Samimy, 2010; Saade, Büyükkurt & Alkhorji, 2011; Schmenk, 2005) of it in the field of language education. In his vehement analysis of CALL, Bax (2003) makes a clear distinction of the studies on CALL and comes up with two groups: (1) extensively scrutinized works which bear more objective stances and (2) works with a more interpretative tone in regard to their attitudes towards CALL. What he highlights in his review of the field is a more in-depth analysis of CALL in language education (Bax, 2011, p. 14) which takes him to categorize the developmental stages of CALL in three aspects.

### **History of CALL**

The history of CALL dates back to the year 1950s when mathematician and computer pioneer Alan Turing foresaw that one day a machine would copy the human intelligence in every way (Hom, 2013). Fittingly, CALL practices started at a date which was not so far from Turing's manifesto. It was around the 1960s that CALL applications began to take place in teaching practices. Initially, it was confined to the universities in America (Stanford University, Illinois University) and later on ushered the path of innovative implementations in language education. The early development of CALL began at Stanford University with Richard C. Atkinson and Patrick Suppes with a Russian course (Suppes, 1971). Later, in the University of Illinois, with PLATO Project (Programmed Logic for Automatic Teaching Operations) the first generalized-computer assisted instruction system with the aim of enabling "interactive, self-paced learning" (Smith & Sherwood, 1976, p. 344) for the students with the aid of the computers as tools took place. And several similar practices in Canadian universities followed these preliminary

conducts. Davies (2002) highlights the rise of the computer use with the introduction of the first personal computer (PC) in late 1970s, which also paved a great many ways for the shareholders in any realm of language education.

### Developmental Stages of CALL

In the history of CALL, the pioneering work of Warschauer (2000) conceptualizes the phases of it under three sections: (1) Structural CALL (2) Communicative CALL and (3) Integrative CALL. Table 1 shows the characteristics of his conceptualization:

Table 1

*Warschauer's Three Stages of CALL (Warschauer 2000, as cited in Bax, 2003, p. 15)*

Stage	1972s-1980s: Structural CALL	1980s-1990s: Communicative CALL	21 <sup>st</sup> Century: Integrative CALL
Technology	Mainframe	PCs	Multimedia and Internet
English-teaching paradigm	Grammar-translation and audio-lingual	Communicate [sic]language teaching	Content-Based, ESP/EAP
View of language	Structural (a formal structural system)	Cognitive (a mentally constructed system)	Socio-cognitive (developed in social interaction)
Principal use of computers	Drill and practice	Communicative exercises	Authentic discourse
Principal objective	Accuracy	And fluency	And agency

As Table 1 above shows, the stages of CALL are given as the historical developments. However, what blurs Bax (2003) for this categorization is the unclear framing of the stages (p. 20) for the fact that the implementation of the approach is not clearly framed by the authors. Therefore, Bax (2003) offers a new labeling of the stages of CALL, but now in a more approach-sided manner. Table 2 shows the classification of CALL in Bax's terms:

Table 2

*Restricted, Open, and Integrated CALL (Bax, 2003, p. 21)*

Content	Type of task	Type of student activity	Type of feedback	Teacher roles	Teacher attitudes	Position in curriculum	Position in lesson	Physical position of computer
Restricted CALL Language System	Closed drills	Text reconstruction	Correct/incorrect	Monitor	Exaggerated fear	Not integrated into syllabus-optional extra	Whole CALL lesson	Separate computer lab
	Quizzes	Minimal interaction with other students			and/or awe			
	Simulations	Interacting with the computer	Focus of linguistic skills development	Monitor/facilitator	Exaggerated fear and/or awe	Technology precedes syllabus and learner needs	Whole CALL lesson	Separate lab- perhaps devoted to languages
Open CALL System and skills	Games	Occasional interaction with other students	Open, flexible					
	CMC							
Integrated CALL Integrated language skills work Mixed skills and system	CMC	Frequent interaction with other students	Interpreting, evaluating, commenting, stimulating thought	Facilitator/Manager	Normal part of teaching-normalised	Toy	Smaller part of every lesson	In every classroom, on every desk, in every bag
	WP	Some interaction with computer through the lesson				Not integrated into syllabus-optional extra		
	e-mail					Technology precedes syllabus and learner needs		
	Any, as appropriate to the immediate needs					Tool for learning		
						Normalised integrated into syllabus, adapted to learners' needs		
						Analysis of needs and context precedes decisions about technology		



As seen in Table 2 above, Bax (2003) renames three stages of CALL as (1) Restricted, (2) Open and (3) Integrated CALL (p. 21). In this conceptualization, rather than the historical development of CALL, what he focuses is basically the level of integration of the CALL approach into the infrastructure of language education. In this vein, according to Bax's amendment, the last phase (i.e. Open CALL) is still yet to come, paving the way for the full integration of CALL into language education. The farther step of CALL, Bax (2003) suggests, would be the "normalisation" step (p. 23). With normalisation what he means is the technological tools that are used to go "invisible" (p. 23) during the teaching practice. Just like wristwatches, pens or shoes we have in classes, the technological tools too can get to be hard to realize them let alone their use (p. 23). So, the dispute over educational CALL operations mostly resides in a successful and effective implementation of such tools into the learning environment.

### **Theoretical Aspect of CALL**

According to Butler-Pacoe (2011), Bax (2003) and many researchers, the initial practices of CALL were grounded in the behavioristic approach of Skinner (1957) for it required some repeated actions along with some reinforcements. In the course of the history of CALL, however, this aspect evolved into a more constructivist approach. The students begin to arrange their own learning experience according to their own paces, construct the new information around their prior knowledge and rather than sterile repetitions they attain full meaning of what they are learning with the schemata they already have. Such instances of learning finely tailored into their schooling achieve a great aim in teaching domains. However, there exist also a group of researchers, teachers and other stakeholders in education that disagree with not the benefits of the technological innovations but rather their ill-integration of them into teaching practices. In this sense, it will be fruitful to state some of the issues on debate in the field.

The field has witnessed many researches (Aykut, 2008; Bax, 2011; Bibby, 2011; Carhill-Poza, 2017; Chambers & Bax, 2006; Constantinides, 2011; Ioannou-Georgiou, 2006; İşigüzel, 2014; Jamieson & Chapelle, 2010; Knowles, 2004; Lee, Yeung & Ip, 2017; Lindner, 2011; Motteram & Stanley, 2011; Neumeier, 2005; Singh, 2003; Terrell, 2011; Timuçin, 2006) working on CALL and its applications in

teaching environments and also many others (Blin, 2004; Carrier, 1997; Chinnery, 2014; Chou & ChanLin: 2015; Jones, 2001; Masouleh & Jooneghani: 2012) studying CALL and the development of autonomy, and they mostly come up with the results that technological advancements help them to gain more effective teaching outcomes and their use in the educational settings can trigger learner autonomy. So what becomes the core issue is its applications and seeking new paths for the improvement of second language education.

### **Conflicts in CALL**

Surrounded by numerous technological tools and applications, today's educational climate purports the high likelihood of the dismay of such a crowd of the educational utensils. An educator barely aware of and hardly competent in such technological conducts in the classroom will be left aghast upon the introduction of such tools. Being of the previous generation, teachers may have problems in embracing all the novelties right away. Getting competent in technology is something not of the qualities of the teachers we train; rather we tend to be more concerned about their pedagogical and subject matter training. To explore the current situation of the ELT practices, Beyene-Segni and Davidson (2019) conduct a study on the integration of technology into ELT classes in Ethiopia and find that teachers barely use technology in their courses. Other findings revealed that although teachers have a sound grasp of the subject matter, they are not so competent in using the educational technologies at their courses. A high reliance on the printed materials supports the fact that teachers are not practicing a technology-integrated approach at their courses. However, as the time shows as also in across the world too, that the stakeholders in all realms of education must keep abreast of the innovations taking place outside the classroom too.

Another point for the fallacies in CALL applications is the unshakable faith in the benefits of the use of any tool. To elaborate, there also exists a notion that any technological innovation can ultimately serve our purpose as the best-fit during our teaching. Teachers and administrators should also be well-aware of the fact that no practice is fit for all. That is, the group characteristics, individual differences, subject matter, and many other variables play a significant role in suitability of the

utilization of the tool in a teaching environment. The appliances should be meticulously selected according to the features of the group we are teaching.

### **The Internet**

In the current era the Internet has been an indispensable part of our lives. We cannot set off for a vacation before opening the navigation, we tend to pick a restaurant after reading the comments on the spot, or even before buying a gift for our boyfriend we search on the Internet. Apart from supplying the vast amount of information it also connects people via social media sites, and many other facilitating applications. The innovation of the mobile devices also pushed the users into the ocean of the Internet as we do not need to be glued in front of a personal computer to search something. People can even go on web quests while walking, on the bus, sitting at a café, etc. The Internet has not been confined to the daily use, the educational settings also have been benefitting from it. Especially for the second language teaching realm it has been extensively used.

### **The Use of the Internet**

Chinnery (2014) names some of the purposes of the Internet in his extensive study and comes up with the classification of its role as an information technology, as a communication technology and as a social and mobile technology (p. 8). Thinking of our students, we can easily admit that they are already synchronized into this online world of the Internet more than they are for the real world outside. Along with those roles, Chinnery (2014) rightfully argues that the Internet can function as a tutor and a tool at the same time (p. 4) by providing the students with the conduct of teaching with language teaching websites, lesson instructions, language exercises, correction and error feedback, a wide array of authentic materials, native language resources, exemplary statements and videos, and many more opportunities which are some benefits of the Internet for the language learners.

Some educational benefits of the Internet are also mentioned in Chinnery's (2014) work: The Internet helps students to increase learner motivation while facilitating their anxiety level (LeLoup & Ponterio, 2003), engage learners (Egbert et al., 2011; Felix, 2008), to promote learner autonomy (Gonzalez & St. Louis,

2012), and also help the retention of the newly learned subject matters with its appealing to multiple intelligences (Mayer, 2009; Paivio, 2006, Isola et al., 2011).

Computers, as it has already been aforementioned, have been of great help for the educational setting, for both the teachers and the students. However, the importance of the computers was peaked with the introduction of the Internet, which also introduced us the term "*blended learning*". A full utilization of the computers was initiated only after the introduction of the Internet which happened to be called "*blended learning*". Like in many areas, the blend of the Internet met great enthusiasm within the educational fields too. In that respect, CALL applications in language teaching have been through tremendous transformations especially after the Internet. Therefore, the blend of the Internet in second language education deserves a few remarks here:

### **What is Blended Learning?**

There is no agreed upon definition of blended learning. Sometimes it is used to refer to large range between distance and traditional classroom learning (Table 3) while others use the terms blended learning and hybrid learning interchangeably (Lloyd-Smith, 2010).

Others differentiate between several terms used for technology enhanced mixes of on/off-site learning (See Table 3). Technology enhanced learning is sometimes referred to as "hybrid or mixed learning"; "e-learning" or "b-learning." (Whittaker, 2013). In the current work the term will be used to refer to any mix of traditional classroom learning and web-supported learning.

Table 3

*Terms Related to Blended Learning (Smith & Kurthen 2007, as cited in Gruba & Hinkelman 2012, p. 4)*

Term	Definition
Web-enhanced	Subjects that make use of a minimal amount of online materials, such as posting a syllabus and course announcements.
Blended	Subjects that utilize some significant online activities in otherwise face-to-face learning, but less than 45 per cent.
Hybrid	Subjects in which online activities replace 45–80 per cent of face-to-face class meetings.
Fully online	Subjects in which 80 per cent or more of learning materials are conducted online

In blended learning a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick-and-mortar location away from home; and the modalities along each student’s learning path within a course or subject are connected to provide an integrated learning experience (Horn & Staker, 2014).

Before it appeared in language teaching and learning it was first used in corporate training, and then applied to higher education (Whittaker, 2013). If blended learning was to be defined as mixing onsite instruction with any degree of off-site technology use (i.e., sharing class notes, presentations, additional reading materials, exam grades etc.), one could claim that a great majority of face-to-face undergraduate courses of today’s universities are indeed blended courses. However, Lloyd-Smith (2010) cautions that “in order for true blending to occur, the structure of the course must be carefully evaluated to determine which instructional objectives can best be met in an online environment and which are better suited to a traditional classroom environment” (p.508). Although there is no single agreed-upon definition of blended learning all definitions refer to courses that consist of a combination of onsite (i.e. face-to-face) with online experiences to enhance student learning. Blended learning or courses could be situated

somewhere in the mid-range of a spectrum of technology enhanced off-site (distant) courses on one side and traditional onsite face-to-face learning/courses on the other end. Therefore, “an online course becomes blended as soon as it introduces onsite, face-to-face meetings” and “typically, an onsite course becomes blended when online activities are designed to replace onsite sessions” (Stein & Graham, 2014. p. 12).

Given the familiarity and interest of today’s youth with the use of technologies, blended learning can be an effective means for enhancing student engagement and motivation. Stein and Graham (2014) provide citations pointing to the vital role of student engagement by stating “any training that does not include the emotions, mind and body is incomplete; knowledge fades without feeling” (Anonymous, as cited in Stein & Graham, 2014, p. 52).

“Student engagement is the product of motivation and active learning. It is a product rather than a sum because it will not occur if either element is missing (Barkley, 2010, as cited in Stein & Graham, 2014, p. 52). A great deal of research has demonstrated that learning experiences that are orchestrated to engage the learner both affectively and cognitively are incomparably more effective than traditional learning experiences that merely target cognitive changes in the learner (Dörnyei, 1998; Burleson & Picard, 2004). Engaging students affectively and cognitively requires diversity in instructional methods, materials and processes. Thus, an effective way of approaching blended learning in language classes should be arranged on a course-by-course basis. In other words, there is no single formula of blended learning that can be applicable for all courses or students of all kinds. For instance, if the course requires students’ in-person collaboration and immediate feedback from instructors and peers, then traditional classroom meeting should be elected. On the other hand, course material requires individual work where students can study individually within their pace.

Talking about the advantages of a blend of technology in ELT, Alfrida (2012) notes that an integrated technology use enables students to gain more control on their own learning, however it is only a matter of the level of integration and how fit it is for the group being taught.

Learning is no longer considered as a one-time event that starts and ends in the classroom, rather it is a continuous process. Blended learning embraces this view of learning more so than traditional onsite learning does. “Blended learning should be viewed as a pedagogical approach that combines the effectiveness and socialization opportunities of the classroom with the technologically enhanced active learning possibilities of the online environment, rather than a ratio of delivery modalities” (Dziuban, Hartman & Moskal, 2004, p. 3).

Utilization of blended learning can also be taken as reflective of a student-centered attitude in education (and language teaching). As increasing numbers of lives in the 21<sup>st</sup> Century constitute a “blend” of physical time/space and online activities through smartphones, tablets, laptops and other means, it is only logical that education of today should also correspond to this “blended” lifestyle. Through its history, formal education has adapted to societal needs and changes as has language teaching. Today’s youth assume a lifestyle that incorporates the use of Internet and technology in every aspect of their daily lives. Therefore, any kind of teaching including second language teaching needs to adapt to these new generation students’ lifestyles. Therefore, the question is not whether or not today’s language teachers should use blended teaching but rather adapting to the needs and life/learning styles of students which should be a vital commitment of educators. Consequently, the coming years will witness language teachers’ increased orientation toward finding optimum mixes of on-site and online teaching in accordance with the needs of their students and requirements of their curricula.

For proponents of blended-learning, it is also a tool for enriching the existing traditional on site teaching practices. For example, even during in-class lecturing, while students are given exercises in grammar classes, their work can simultaneously be projected onto screen and this will not only eliminate the hassle of teacher checking students notebooks but it can also provide the classroom with immediate feedback about the work of multiple students. Likewise, while lecturing the teacher can ask multiple choice (or true-false) questions about students attitudes and students can immediately share their reactions by using their smartphones or computers and these reactions could be incorporated into the subject being discussed. Similarly, a rich variety of videos could be given as

homework as listening assignments which will not only save time for students and teachers but will also be more convenient for students.

One of the obvious advantages of blended learning is its cost effectiveness. By extending teaching and learning outside the classroom, blended learning can considerably reduce costs of education. For example, by utilizing a blended learning approach “the school needs slightly fewer teachers overall” and it can “use the savings to cover the cost of digital learning, but also to pay excellent teachers substantially more-and all teachers more than current salaries” (Public Impact, 2013, p. 3).

Blended learning can also contribute to improved access to education for those who cannot benefit from traditional education such as people with severe disabilities, hospitalized people, those imprisoned, child-rearing women, people with limited economic resources for education and many others. Therefore, similar with distance education, blended teaching can be used in creating equal educational opportunities for all and thus it can contribute to furthering democratization of education.

Not every author in the field of (language) education sides with blended learning. Given that history of teaching has all along involved face-to-face teaching, perceptions, habits and conceptualizations about teaching practices have evolved accordingly. Therefore, one of the most significant concerns about distance learning has to do with possible drawbacks of not being in face-to-face contact. Proponents of traditional onsite teaching might express concern about the quality of student learning in online courses or regarding off-site elements of a blended course. On the other hand, there have been a host of studies showing contrary evidence. In their meta-analytical study, Means, Yukie, Murphy, Bakie, and Jones (2010) examined over a thousand studies on online learning conducted between 1996 and 2008. Their findings revealed that on average, students in online learning conditions performed modestly better than those receiving face-to-face instruction. Those students who received a blend (mix) of face-to-face and online teaching performed better than students who received exclusively face-to-face teaching.



A possible implication of distance learning is whether or not (or the degree to which) it might interfere with creating a sense of (learning) community. Rovai and Jordan (2004) investigated the relationship of sense of community between traditional classroom, blended, and fully online undergraduate courses. Their findings showed that blended courses generated a stronger sense of community among students than either traditional or fully online courses. Furthermore, working with a Malaysian sample of undergraduate students, Tayebinik and Puteh (2012) found that students had high levels of satisfaction on blended learning courses because they believed these courses promoted their sense of community. There have also been studies reporting contrary results. Drouin and Vartanian (2010) compared face-to-face and online students' feelings of and desire for sense of community. They found that they felt higher levels of sense of belonging than the latter one. An additional concern about distance learning has to do with the concern that educational activities cannot be sufficiently structured while students and the teacher are not present at a traditional classroom setting. The core issue indeed lies in the way we make use of the technological facilities in our educational setting. In this respect, this study captures the use of WBC in second language teaching environment and how it proceeds.

### **Web-Based Corpus (WBC)**

Before detailing the WBC perhaps it will be beneficial to note the definitional aspect of corpus: Corpus is a Latin word, meaning "body, collection", and in plural form "corpora" meaning "bodies, collections" (Cambridge Dictionary). The corpus of a language bears all the uses and frequencies of all of the words, expressions and phrases of that have appeared in the written or spoken discourse up to that time. Namely, a word use in the corpus can be highly informative about how and where to use the word and with what other words before or after, gaining the learners some awareness about the form and meaning of the language use. Mainly, the corpora are used in context, with grammatical behavior of the words, with collocations and lexical patterns, with the frequencies of the words and word combinations and in different registers.

With the digitalized world many online sources have been run. Corpora of English language have been the most widely compiled one with many sites at

hand. To name a few of those websites will be helpful to understand the range of corpora use (Stone, 2019):

BNC has been covering 100 million words of the British English covering the period between 1980s and 1993. Bank of English has 450 million words by 2005, with 70% of British and 20% American, and 10% other dialects of English. Brown Corpus compiled in 1960s has been one of the earliest corpora with 1 million American English words. MICASE is Michigan Corpus of Academic Spoken English which started in 1997, and distinctive in containing transcriptions and audio files of academic speech. (p. 28).

For becoming a fluent user of the target language, a learner is to be exposed to authentic language with the materials they are studying. Exposure to the genuine body of the target language texts enables a second language learner to be more competent and aware of the contextual use of the words, phrases and expressions within the language. In support of this argument, Chinnery (2014) advocated the use of corpora in second language teaching in terms of hosting a tremendous language treasure within. Not surprisingly, many websites on English language corpora exist in the Internet which have different foci such as on academic speech (Michigan Corpus of American Spoken English), pronunciation (Speech Accent Archive), popular literature and media (Corpus of Contemporary American English) (Chinnery, 2014; p. 4) to name a few. The programs require the users enter a word or phrase and hit the search button to list all the textual examples stated within the corpus. In the list the students are to read a vast array of examples from many contextual instances, generating the infrastructure of the use and collocational hints at the first place. That is, the words appearing adjacent to the word or phrase they are checking also unnoticeably help the collocational knowledge to be developed.

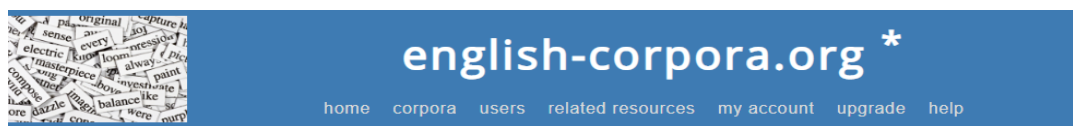
### **Corpus of Contemporary American English (COCA)**

With the wide spread of the Internet use the number of language teaching websites is up to increase in a short time. Along with the language learning websites, corpora sites have an influential role in regard to addressing to the learners in authentic and user-friendly compositions: In this study, Corpus of

Contemporary American English (henceforth COCA) website has been utilized as the main supplemental English language learning tool.

Being a prominent linguist, Davies, in 2008, created a website collecting all the American English corpora together and making it open access to everyone. He claims that with more than 450 million word corpus it has been the largest corpus of American English and also being used by more than 40,000 individual users each month also makes it one of the most widely-used corpora of our time (<http://davies-linguistics.byu.edu/personal/>).

Besides, COCA has been one of the most widely-used online sources of corpora currently available. Because of its design, it is also perhaps the only corpus of English that can be used to look at ongoing changes in the language. The corpora does not only provide the “List” for the words, but it has the options like “Chart”, “Collocates”, “Compare” and “KWIC (keyword in context)” which also sort down all the examples in any word check. Apart from these, the corpus has distinctive genres like “spoken, fiction, popular magazines, newspapers, and academic journals” keeping in line with the real world which makes it the “first reliable monitor corpus of English, and the first balanced monitor corpus of any language reliable monitor” (Davies, 2010, p. 453). For the English language users. COCA has been widely used across the world, as well as several other sources that have been composed to contribute to the corpora studies as listed in Figure 1:



Created by Mark Davies, BYU (Google Scholar). [Overview](#), [search types](#), [looking at variation](#), [corpus-based resources](#).

The most widely used online corpora -- more than 130,000 distinct [researchers](#), teachers, and students each month.

English	# words	language/dialect	time period	compare
<a href="#">iWeb: The Intelligent Web-based Corpus</a>	14 billion	US/CA/UK/IE/AU/NZ	2017	<a href="#">Info</a> (中文)
<a href="#">News on the Web (NOW)</a>	7.3 billion+	20 countries / Web	2010-last month	
<a href="#">Global Web-Based English (GloWbE)</a>	1.9 billion	20 countries / Web	2012-13	
<a href="#">Wikipedia Corpus</a>	1.9 billion	English	2014	<a href="#">Info</a>
<a href="#">Hansard Corpus</a>	1.6 billion	British (parliament)	1803-2005	<a href="#">Info</a>
<a href="#">Early English Books Online</a>	755 million	British	1470s-1690s	
<a href="#">Corpus of Contemporary American English (COCA)</a>	560 million	American	1990-2017	*****
<a href="#">Corpus of Historical American English (COHA)</a>	400 million	American	1810-2009	**
<a href="#">The TV Corpus</a> <b>NEW</b>	325 million	US/CA/UK/IE/AU/NZ	1950-2018	<a href="#">Info</a>
<a href="#">The Movie Corpus</a> <b>NEW</b>	200 million	US/CA/UK/IE/AU/NZ	1930-2018	<a href="#">Info</a>
<a href="#">Corpus of US Supreme Court Opinions</a>	130 million	American (law)	1790s-present	
<a href="#">TIME Magazine Corpus</a>	100 million	American	1923-2006	
<a href="#">Corpus of American Soap Operas</a>	100 million	American	2001-2012	*
<a href="#">British National Corpus (BYU-BNC)*</a>	100 million	British	1980s-1993	**
<a href="#">Strathy Corpus (Canada)</a>	50 million	Canadian	1970s-2000s	
<a href="#">CORE Corpus</a>	50 million	Web registers	2014	

Figure 1. The main page of Corpus of Contemporary American English (COCA) created by Mark Davies

As seen in Figure 1, several classifications have been composed for the corpora building. The main page of the site displays the number of words that that section is composed of, the register the section belongs to and time period the words are retrieved from. Amongst a host of the benefits of the corpora outstand two: (1) it is greatly useful for the language learners to firmly grasp a true mastery of the language with a wide range of examples from many registers and also (2) it provides anyone with a variety of genres from different professions who specifically focus on the terminological aspect of the word uses in the language. Eliminating the need for carrying huge bulks of dictionaries, these online sources have enabled us to benefit from them with a much ease of use. Besides the user-friendly aspect, the body of corpora also provides us with numerous authentic and comprehensive uses of the language. Another point to make is that the use of such sources gains the language learners a control over their actual learning process. They realize a real learning as they are truly engaged with the source themselves which helps to expedite in learning. As given in Figure 2 the search section can easily be used and provides the user with categories of “List”, “Chart”, “Collocates”, “Compare” and KWIC”.



Figure 2. Screenshot from COCA main search page

As seen in Figure 2, any word typed in the search bar is browsed in the site and the “List” search results are displayed like in Figure 3:

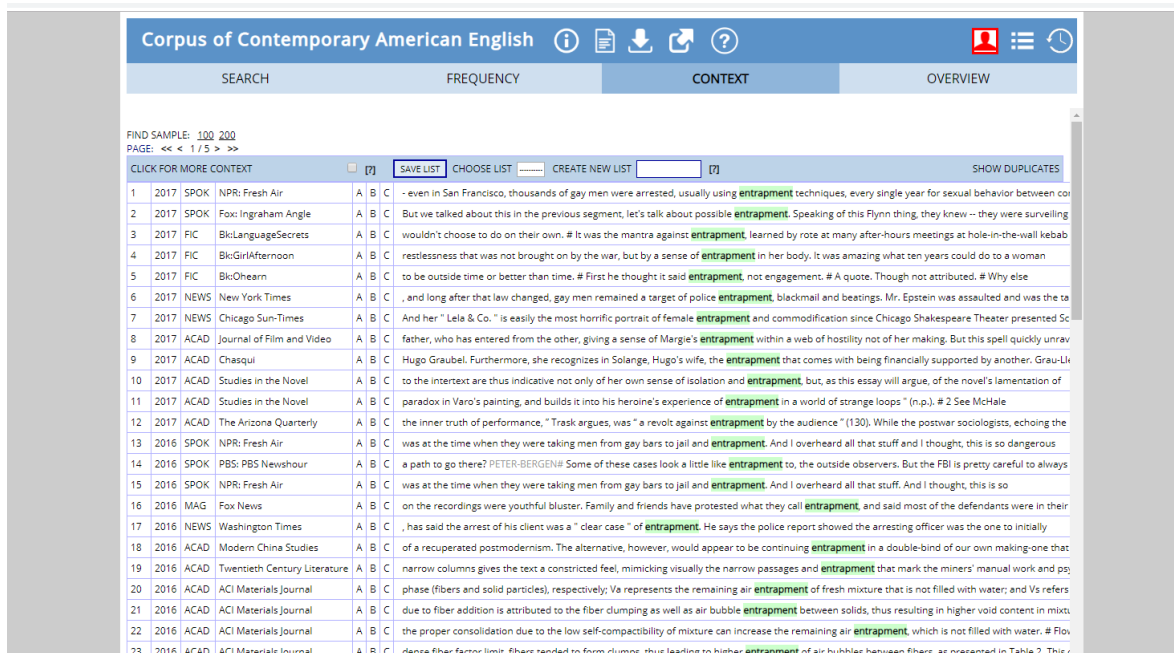


Figure 3. Screenshot from COCA concordances of the word “entrapment” sorted on the “List” option

As seen in Figure 3, all the uses of the word “entrapment” are availed to the user with a neat listing. The user can read all the concordances of the example within the sentences and a closer look is also possible by clicking on the left part of the

page where given are the genres of the searched word. Figure 4 documents such a genre-check of an example:

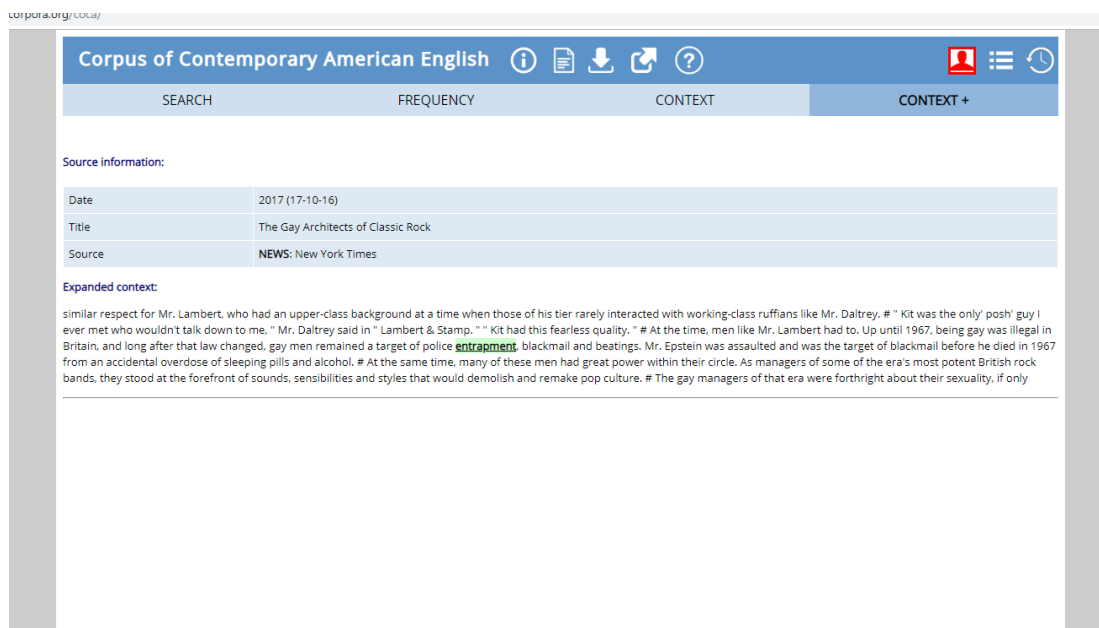


Figure 4. Screenshot of the query for “entrapment” on COCA with original context detailed with date, title and source

Of course there are a host of available queries enabled for the users ranging from iWeb sources, virtual corpora, movies and TV series script bases all of which extensively cover a variety of uses of the site for multiple purposes. As advocated by Nation (2000), the use of corpus is highly beneficial by enabling the users with a wide range of uses. In the similar vein, Schmitt also (2000) recommends the use of corpus with the word concordances promising an efficient learning experience for the language students.

As cited by Nation (2000, p. 184) there are a number of benefits of the concordances for language learners:

... They can classify the items in a concordance into groups. Guidance, such as group headings, questions or a table to fill, may be already provided.

... They can make generalizations and rules based on the data.

...They can recall items when the contexts are presented with the concordance word deleted. (Stevens, 1991).

The related literature indicates that there is a relationship between the use of such online sources for a language learner and their autonomy level. In this regard, this

study has been set out to explore the actual case of such a relation. In order to have a sufficient hold of the subject, methinks it will be beneficial to state some remarks on the concept of learner autonomy.

## **Learner Autonomy**

Learner autonomy has received a great deal of attention in recent years. With the new trends and approaches in language teaching focus has shifted from teacher to the learner. The panacea for an ideal learning to take place is believed to be lying in empowering autonomy in the learners. Individualization and personalization in learning are two terms here to be highlighted in terms of the program's being finely tailored for each single student for their own learning styles or strategies. Blended learning allows students to better personalize and internalize the learning material and thus leads to increased academic achievement. Similarly, there has been broad agreement that "autonomous learners understand the purpose of their learning program, explicitly accept responsibility for their learning, share in the setting of learning goals, take initiatives in planning and executing learning activities, and regularly review their learning and evaluate its effectiveness" (Holec, 1981, as cited in Little, 1991, p.1).

Various definitions of the concept of learner autonomy highlight key elements of "ability" versus "capacity"; "taking responsibility" versus "taking control of" or "taking charge of" one's learning processes. Yet, the rich literature articulating a variety of definitions of the terms also underline the learner's willingness as unless the learner is willing to take responsibility regardless of their "capacity" for autonomy they may not exercise this ability. One way of arriving at a certain level precision in the definition of the term one should also take into consideration "what it is not":

It is not self-instruction/learning without a teacher;... it does not mean that intervention or initiative on the part of a teacher is banned; ... it is not something teachers do to learners; i.e. a new methodology; ... it is not a single easily identifiable behaviour; ... it is not a steady state achieved by learners once and for all. (Esch, 1998, p. 37)

In other words, learner autonomy does not eliminate the need for the teacher, or initiative by the teacher and it is not a quality individuals attain all at once. In

specifying boundaries of learner autonomy Holec (2008) raises some essential issues:

Does self-direction simply mean that the learner will do here what the teacher does in traditional other-directed learning environments? What new roles for teachers are defined in the approach? What should materials suitable for self-directed learning look like? How can learners be adequately trained to achieve learning competence? How can teachers be trained to adequately play their roles? What are the defining features of self-evaluation? What are the appropriate representations on language and language learning that both learners and teachers should base their actions on? (p. 3).

While for some learner autonomy is closely related to outside of classroom teaching settings, others focus on personality attributes enabling autonomy as yet others highlight matters such as power and control or social participation into the learning process (Palfreyman, 2003). The following are 13 dimensions of autonomy specified by Sinclair (2000, as cited in Borg & Al-Busaidi, 2012, p. 5) as parameters of the construct with considerable consensus in the language teaching community.



Table 4

*Dimensions of Autonomy (Sinclair, 2000, as cited in Borg & Al-Busaidi, 2012, p. 5)*

- 
1. Autonomy is a construct of capacity
  2. Autonomy involves a willingness on the part of the learner to take responsibility for their own learning.
  3. The capacity and willingness of learners to take such responsibility is not necessarily innate
  4. Complete autonomy is an idealistic goal
  5. There are degrees of autonomy
  6. The degrees of autonomy are unstable and variable
  7. Autonomy is not simply a matter of placing learners in situations where they have to be independent
  8. Developing autonomy requires conscious awareness of the learning process – i.e. conscious reflection and decision-making
  9. Promoting autonomy is not simply a matter of teaching strategies
  10. Autonomy can take place both inside and outside the classroom
  11. Autonomy has a social as well as an individual dimension
  12. The promotion of autonomy has a political as well as psychological dimension
  13. Autonomy is interpreted differently by different cultures
- 

From the above definitions in Table 4 one can draw the inference that learner autonomy might be a variable contributing to greater use of technology in second language learner but it may also be a quality improved by the use of the program. The latter is the hypothesis of the current study.

### **Definition of Autonomy and Its Historical Development**

Being a multilayered phenomenon second language learning bears many factors influencing the learning process. Researchers, educators, institutional administrators have been seeking for many more paths to instill a better learning process. In this regard, the 20th century witnessed a great deal of research on autonomy. Beginning with Holec's (1982, p. 3) definition of the term as "one's taking the responsibility of his own learning" learner autonomy has gained a dramatic significance and momentum in its inclusion of it in the education programmes and methods. New approaches have paved the way for promoting

autonomy in learners who can take charge of their own needs as a learner and since then on the field of language learning has been witnessing an exceeding quantity of research on autonomy. Since Holec's definition of learner autonomy in 1981 at the Council of Europe's Modern Languages, autonomy has been extensively studied to promote a better second language education. Holec (1982) conceptualizes autonomy as an attribute of the learner while in some other occasions it refers to enabled situations in which learners take action for themselves. Allwright (1988) redefines autonomy within "the rejection of traditional classroom" suggesting a novel way for language pedagogy; whereas Dickinson (1992) focuses on the independence of the learners both in cognitive and behavioral sense in the classroom. Dam (1995) goes one step further and advocates the implementation of learner training for autonomy. Nunan (1997) later discusses the idea of degree in autonomy. He suggested a five-step learner action in gaining autonomy: "awareness, involvement, intervention, creation and transcendence" (p. 195). Nunan (1997) makes a clear emphasis on the fact that autonomy is a matter of level within the dimensions of "content" and "process" (p. 195). In the same year Littlewood (1997, p. 81) developed a 3-step model for autonomy. The steps were composed of language acquisition, learning approach, and personal development. Again in the year 1997, Macaro also suggested a 3-step model for autonomy which is composed of "autonomy of language competence; autonomy of language learning competence and autonomy of choice and action" (p. 170-172). Scharle and Szabo's work (2000) on autonomy is also a 3-step one, with the distinctive dimensions of "raising awareness" (p. 15), "changing attitudes" (p. 48) and "transferring roles" (p. 80) to which Liu (2005, p. 51) adds positive interdependence as another step to fulfill complete autonomy.

Perhaps it will be helpful to mention self-directed learning as it is frequently mistaken for the concept of learner autonomy. Self-directed learning is about the "self-instructional processes and the psychological characteristics of the learner that support them" (Benson, 2001, p. 33). At this respect, the distinction should be specified between autonomy and self-direction. Benson, in this regard, pinpoints the term of learner autonomy as the capacity for exercising control over one's own learning in language learning. However, self-directed learning is a mode of learning that is performed by the learner's own direction, rather than other-related

bodies. To elaborate, learner autonomy is an asset while self-directed learning is a mode of learning (Benson, 2001, p. 33).

The field of second language learning has been scrutinizing the concept of autonomy with an array of researches studying across many languages (Chik & Ho, 2017; Cole & Vanderplank: 2016; Cotterall, 1995; Gao, 2010; Little, 2009; Najeeb, 2013; Nunan, 2003; Oruç-Ertürk, 2016; Pekkanlı-Egel, 2009; Smith, 2008; Smith *et. al.* 2018, Yağcıoğlu, 2015) and coming up with results favoring autonomy as an asset to develop in the teaching practice.

### **Types of Autonomy**

Literature on autonomy has led the field going on the distinction of the different sorts of autonomy. The first of those researchers is Littlewood (1999) who comes up with “proactive” and “reactive” (p. 75) autonomy types. The former refers to the “learners’ individuality and the directions the learners set up for themselves” (p. 75). The latter means the one in which learners once initiated a direction can take on the part and further the task onward (p. 76). What Benson (2001) suggests as a method in regard to the learner autonomy is composed of three stages: learning management, cognitive processing and the content of learning. According to the theorist, each of these steps signifies a different degree of learner autonomy. All these models discussed above suggest a certain level of learner autonomy but it is only a matter of how to tailor it to the teaching and learning process (Nunan, 1997; Benson, 2006).

Benson (1997) notes three versions of autonomy: technical, psychological and political. However, he gives an extensive panorama of the autonomy based researches. For example, Ribé (2003, as cited in Benson) comes up with the distinction of “convergence”, “divergence-convergence” and “convergence-divergence” positions (p. 113). Convergence, for Ribé (2003), means a more shared mode of autonomy; whereas divergence signals a more independence-instilling mode of environment. O’Rourke and Schwienhorst (2003) emphasize the ‘individual-cognitive’, ‘socialinteractive’ and ‘exploratory-participatory’ perspectives of learner autonomy. Oxford (2003) expands Benson’s (1997) three-step model which takes on the “technical”, “psychological”, and “political” and adds sociocultural” aspects, and “political-critical” aspects of autonomy concept. The

dimension of culture is highlighted in some researchers. Fittingly, Holliday (2003) puts great emphasis on the “native-speakerist”, “culturalrelativist” and “social” approaches in regard to fostering autonomy. Two influential figures, however, precise the degree of learner autonomy: Smith (2003) draws a line in between the “weak” and “strong” versions of autonomy; whereas one of his innovative contemporaries Kumaravadivelu (2003) recognizes “narrow” and “broad” interpretations of learner autonomy. This relative level of autonomy led some researchers to develop particular concerns on the origin of the learners. To exemplify, Pennycook (1997), Holliday (2003) and Schmenk (2005) dwell on the ill-side of comparing the West world originating learners to the other rooted learners within the learning environment. The researchers argue over the optimal autonomy existence of homogeneity in the learner groups.

Marking the innovative change in the orbit of teaching from the teacher to the learner, Longworth (2003) notes a tremendous “180-degree shift of emphasis and power from provider to receiver” (p. 12). Similarly, Charles (1999) suggests that language teachers need to “empower” their students through giving them more responsibilities (p. 221) during their learning process. For Little (2007, p. 14) learner autonomy and the target language proficiency can flourish together, and cannot prosper in isolation (p. 14). For anything in order to develop, we need to talk about some steps.

### **Autonomy and Components**

In a language education book on testing certain aspects of language learning, Benson (2010) seminally picks on learner autonomy and extensively analyses the dismay over the testability and measurability of learner autonomy. He comes up with four problems: he focuses on control. The degree of control taken by the student or some other body in the educational process is of great importance. The control instilling part can change from one occasion to other. In an assignment the teacher may ask the students to pick a topic to their interest whereas the unit’s main reading passage is authorized by the institution or the educators as decision-makers.

As the second problem he notably states that being a capacity rather than an outcome, we need to analyze the autonomy exercised by the students quite cautiously.

For Benson the third problem lies in the developmental aspect of autonomy. To elaborate, it is not a one-shot cure for the learners; on the contrary it should be tailored into the teaching program and promoted in learners as we want them to become active learners in their out-of-class and lifelong learning. Rather than the end, it should be treated as a means to get the students to their journey of learning. Autonomy is a set of skills to be developed or a capacity that is already fashioned before the teaching occurs. Many researchers dwell on this issue over the fact that if it is a skill we can work on the improvement of it, however, if it is capacity what will we do with the students that already lack it? This debate has left more teachers and students along with the educational bodies indecisive and incompetent than expected. To make a small digression, this research takes autonomy as a skill that can be developed, so only after this perception can we strive for the ways of improving it. That explains why we conduct some measurement tests to check the autonomy level of the students and in this way to try ways for their development in autonomy.

As for the last problem, the learners can fake autonomy, for Benson that they have it or they do not. He gives example of Breen and Mann's (1997) study in which students are to "mask autonomy" (as cited in Benson, 2010, p. 84) and thus act according to the expectation of the teacher. To exemplify, the student's behavior can be taken as an "autonomous" one, however it hardly satisfies us that students who do not show "observable" behaviors can be taken as non-autonomous students. In this sense it falls far from being a traceable and observable feature of the learners. So autonomy is a complex construct with many parameters to be considered in the educational context. In line with that, there are also some points that still cause some dispute over the issue.

### **Decision Making Process**

Benson (2010) emphasizes the importance of the student inclusion into the teaching planning stage. In that regard he gives the study of Simmons and Wheeler (1995, p. 15) as an example. It is concluded that we can benefit from it as

“an opportunity to enable full learner participation in the decision-making processes associated with selection of content, agreement on procedures, choice of activities and tasks, direction of working and ongoing evaluation” (cited in Benson, 2010; p. 87). In the study, it was observed that students were taking responsibility as the weeks proceeded. Champagne, Clayton, Dimmitt, Laszewski, Savage, Shaw, Sroupe, Thien and Walter (2001) claim that “testing itself is anti-autonomy” (as cited in Benson, 2010, p. 91).

In order for something to be observed we have to know the subcomponents of the major construct and in the body of his chapter Benson (2010) gives the bright and ill sides of the observability of autonomy. In the chapter he extensively scrutinizes the testability of autonomy, claiming that in order to be able to test something; we are to know the subcomponents making up the whole body of autonomy. According to him the difficulty of testability of autonomy indeed deeply lies in the intractability of autonomy. In other words, the theorists fall into the dismay of behavioral or cognitive traces of autonomy to test it.

### **Autonomy and Culture**

In 1990s autonomy was seen as a construct to be implemented to the groups in line with the cultural background of the members. In this respect, Benson (2006) makes an extensive study of the world examples and comes up with the notion that though there have been mixed results in the research examples across the world, cultural characteristics of the learners mostly become the determinants of the autonomy fostering along the course of learning process. He exemplifies it with a number of studies worldwide to draw a more vivid picture of autonomy instances in second language education in a more global sense in which Asian oriented groups were found to be autonomous whereas African context was not ready for such a fostering (Braine, 2003; Chan, Spratt & Humphreys, 2002; Spratt, Humphreys, & Chan, 2002; Sonaiya, 2002; Gan, Humphrey & Hamp-Lyons, 2004; Gieve & Clark, 2005; Huang, 2006; Littlewood, 1999; 2000; Nix, 2002; Ruan, 2006; Smith, 2001 & 2003; Snyder, 2002; Tang, 1999; Tomei 2002).

## **Contexts of Application**

Benson (2006) draws a developmental application of autonomy in learning settings, mentioning the fact that the early beginnings met the self-access centers which instill self-directed learning. It was an out-of-class tendency that was taken up by the learners. While self-access centers were serving the learners, in the meantime 1990s witnessed a more direct intervention and implementation of autonomy within the learning processes.

## **Autonomy and Current Time**

Children and youth of today do not grow up as people merely skilled in the use of a variety of technologies but they become fully used to having these technologies available in all domains of their lives and wherever they are. Thus Prensky (2001) refers to these generations as “digital natives” (p. 1) viewing the Internet as the primary source of information more so than their textbooks or teachers (Metros, 2011). Historically, the school and classroom were essential settings for learning. However, today some scholars claim that about 80% of learning takes place informally and outside of classrooms (Cross, 2006). This necessitates a new definition of the classroom and learning that is inevitably more flexible and that draws looser boundaries between formal and informal as well as in-class and out-of-the-class learning.

Examining students’ satisfaction in language learning, Wu, Tennyson, and Hsia. (2009) find that student satisfaction is significantly determined by factors such as self-efficacy, performance expectations, system functionality, content feature, interaction, and learning climate which are the primary determinants of student learning satisfaction with BELS (blended e-learning system).

Sharma and Barrett (2011) provide details about the physical application of blended learning into a classroom environment. Garrison and Kanuka (2004) highlight the actual effectiveness of blended learning in language classes in higher education as the students are to be more independent learners who can take active roles in their own learning and continue the learning process within their own pace. Thus, the assumption that learners are expected to be much more competent in finding out their own ways to learn English than the younger learners

also proves technology enhanced learning more crucial especially in higher education. However, some scholars (Holley & Oliver, 2009) are not in full agreement about blended learning and state their doubts about its being helpful for “widening participation student, struggling to adjust to university life, juggling working to minimize debt and family commitments” (p.1) and conclude that blended learning may affect the socialization of the students as students do not come together but rather remain alone in front of their computers thus interaction between students and the instructor is kept at the minimum level.

### **Readiness for e-Learning**

Readiness for e-learning refers to individuals' ability to use various multimedia e-learning resources to enhance quality of learning. More specifically it has to do with having sufficient level of prior skills/knowledge and affective qualities enabling one to optimize his/her e-learning experience. Some authors view e-learning as a system with input and output variables (Akaslan & Law, 2011). They propose that the first tangible output of this system would be achievement followed by satisfaction and further participation (Hung, Chou, Chen & Own, 2010; Moftakhari, 2013; Yurdugül & Demir, 2016). When the output variables of this system are not favorable enough, it could be either due to the input variables and/or the system variable. A host of studies have documented that there are a variety of factors influencing effectiveness of e-learning. One of the most important of these is readiness level of the learner (Park & Choi, 2009). Although studies have consistently reported effectiveness of incorporating e-learning components into language teaching programs, not sufficient empirical attention has been given to learners' readiness for using e-resources. In other words, if learners' e-learning readiness level is not taken into account prior to the implementation of any use of tech-enhanced language learning program, its effectiveness might be greatly compromised. Therefore, since the current study examines effectiveness of a WBC teaching program in language education, it is hypothesized that those students who are ready for using the program and use the program will have more favorable outcomes (improved levels of learner autonomy; development in their e-learning readiness level; more use of vocabulary learning strategies and vocabulary size development).



## **Language Learning Strategies**

Being a demanding long process, language learning is no easy task. To facilitate this process, there have been suggested some learning strategies in the literature. Before talking about the learning strategies (henceforth LS), it will be helpful to define what they are: Learning strategies, for Rubin (1975), are “the techniques or devices, which a learner may use to acquire knowledge” (p. 43). Also in Schmeck’s words (1988) it is “the implementation of a set of procedures for accomplishing something” and “a sequence of procedures for accomplishing learning” (p. 5). Another prominent figure defining what a learning strategy is Oxford (1990), who simply describes learning strategies as “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed and more transferable to new situations” (p. 8). As seen from the definitions, LS are to expedite learning and foster a long-lasting learning to occur even long after the finalization of the language courses. In time, realizing the need for a more specific learning post, i. e. vocabulary learning, scholars specifically worked on vocabulary learning scheme. Therefore, L2 researchers focused on the classification of VLS: Stoffer (1995) made a categorization of the strategies with nine strategy types. Following that, Gu and Johnson (1996) reported two basic categories of VLS: *metacognitive regulation* and *cognitive strategies*. Different from these categories, Nation (2001) suggested groups of strategies under the titles of planning, sources and processes. Amongst all learning strategies came up with a clear distinction of Vocabulary Learning Strategies to enhance learning new words in a second/foreign language (Rasti-Behbahani, 2015). A number of pioneering linguists encourage an awareness and use of VLS in order to promote learner autonomy (Benson, 2001), to facilitate the learning process (Nation, 1990) and for other linguistic and educational purposes (Schmitt, 1997). To illustrate a more vivid view of these VLS it will be beneficial to tabulate the categorization of VLS.

## **Vocabulary Learning**

Language learning is not only comprised of word knowledge, but it is a significant aspect of it. As Nation (1993) puts it “Vocabulary knowledge enables language use, language use enables the increase of vocabulary knowledge,

knowledge of the world enables the increase of vocabulary knowledge and language use and so on.” (p. 115). As the importance of word knowledge of the learners is so evident in the field, the use of ways in learning a second language gets to be more crucial. In that regard, vocabulary learning strategies have been closely associated with *good language learners*. Many researches have been carried out in seek of empowering the language learners in the way they benefit from VLS in enriching their word knowledge in a more efficient way. The introduction of VLS to the field was not before the 1990s, and since then considerable research have been conducted on how to benefit from them, many bringing new methods and techniques. In line with that, it is only after this period that the Lexical Approach was coined and provided the field with the notion that meaning is constructed within the frame of its context. That is, no word can be fully meaningful in isolation; therefore a word gains its meaning within the phrase or sentence that it appears. This fact brought about a need for a closer look to the contextual analyses, semantic syntax, word frequencies, and usages of words studied.

It was only after the 1990s that the vocabulary teaching has gained a new momentum in methodology and became a center in SLA. Ellis (1994) lists some names that have conducted significant researches on the characteristics of good language learners, and he comes up with studies that emphasize the importance of VLS use (Gillette, 1987; Huang & Van Naerssen, 1987; Lennon, 1989; Reiss, 1985; Rubin, 1978; Stevick, 1989, as cited in Ellis, 1994). The related literature has been housing that rather than the vocabulary it has been the grammatical structure of the words that has been focused on. However, with the advent changes brought about by the educational technologies, the structure-based teaching lost its space to meaning-based approach in linguistic competences. The notion bears that grammar cannot communicate but meaningful words can. This trend was also triggered by the emergence of computers in SLE/FLE as the communicative aspect of learning a language. Klapper (2008) articulates that vocabulary learning is one aspect of language learning that vehemently makes use of strategies. This also draws our attention to the students in that an active use of learning strategies is only possible with their full engagement as a rigorous study of vocabulary requires an active engagement from the students in their

learning process. In this respect, Hedge (2000) highlights that the word knowledge of the students is also bound to how actively they are engaged with learning new word items. Students' activeness is of paramount importance not only for retaining of new words but also for the future learning actions. As in Oxford's words (1990) learning strategies are "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed and more transferable to new situations" (p. 8). This definition bears that students' active part in the learning process is necessary in order to learn a new word item. Knowing a word, suggest McCarthy and Carter (1997), is not merely knowing about the lexical properties of the word; it also has a semantic and syntactic dimension to itself which builds our word knowledge in many respects. Hedge (2000) comes up with a distinction between the words' relations as "syntagmatic and pragmatic relations" which adhere to the "denotative and connotative meanings" (p.112-116) of words. Different features of the words have been extensively analyzed by Nation (2001, p. 27) who makes a list of the dimensions of knowing a new word and details the characteristics of each under three basic topics as presented in Table 5:

Table 5

*Dimensions of Knowing a Word (Nation, 2001, p. 27)*

Form	Spoken	R	What does the word sound like?
		P	How is the word pronounced?
	Written	R	What does the word look like?
		P	How is the word written and spelled?
	Word parts	R	What parts are recognizable in this word?
		P	What word parts are needed to express the meaning?
Meaning	Form and meaning	R	What meaning does this word form signal?
		P	What word form can be used to express this meaning?
	Concept and referents	R	What is included in the concept?
		P	What items can the concept refer to?
	Associations	R	What other words does this make us think of?
		P	What other words could we use instead of this one?
Use	Grammatical functions	R	In what patterns does the word occur?
		P	In what patterns must we use this word?
	Collocations	R	What words or types of words occur with this one?
		P	What words or types of words must we use with this one?
	Constraints on use (register, frequency,..)	R	Where, when, and how often would we expect to meet this word?
		P	Where, when, and how often can we use this word?

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*R: Receptive knowledge, P: Productive knowledge*

As presented in Table 5 knowing a word is a multilayered phenomenon consisted of three basic aspects, that is, form, meaning and use. Within each of these classifications lie several dimensions of words like spelling, pronunciation, word structures, form and meaning, concept and referents, associations, grammatical functions, collocations and the contextual use of the words (p. 27)

Knowing about such details of a word endows one with the mastery of the target language in many respects.

Apart from being a complex and gradual process, vocabulary learning has also been under vehement scrutiny with regard to determining a reasonable comprehension threshold for a written or spoken text. Though previously it was proposed that 95% coverage would be an adequate level, the following research found that a degree close to 98-99% is necessary (Nation, 2006), which comes to mean that one word in 50 is unknown to the person (Schmitt, 2008). Of course the more words are known by the second language learner, the better; however, literature also bears examples that with lower coverage levels comprehension still occurred (Bonk, 2000, as cited in Schmitt, 2008). Spoken texts require a lower coverage figure compared to a written text as the body language plays a great role in building the meaning with the help of gestures and mimics. So a firmer level would be set for written texts to enable a sufficient level of comprehension. This study made use of Nation's vocabulary size test composed of 14 levels, each of which represents 1000 English words. The test having 14 bands, in total represents 14000 words of the English language. In his study of the test he comes up with the following conclusions:

1. The greatest variation in vocabulary coverage is most likely to occur in the first 1,000 words, and in the proper nouns. The first 1,000 plus proper nouns cover 78%-81% of written text, and around 85% of spoken text.
2. The fourth 1,000 and fifth 1,000 words provide around 3% coverage of most written text, and 1.5%-2% coverage of spoken text.
3. The four levels of the sixth to ninth 1,000 provide around 2% coverage of written text and around 1% coverage of spoken text.
4. The five levels of tenth to fourteenth 1,000 provide coverage of less than 1% of written text and 0.5% of spoken. (p. 79).

Apart from the stated conclusions above, Nation (2006) also tabularizes a detailed description of the word levels and their coverage in Table 6 below:

Table 6

*Average Coverage and Range of Coverage of a Series of Word Levels (Nation, 2006, p. 79)*

Levels	Number of Levels	Approximate written levels coverage (%)	Approximate spoken levels coverage (%)
1st 1000	1	78-81	81-84
2nd 1000	1	8-9	5-6
3rd 1000	1	3-5	2-3
4th-5th 1000	2	3	1.5-3
6th-9th 1000	4	2	0.75-1
10th-14th 1000	5	<1	0.5
Proper nouns	1	2-4	1-1.5
Not in the lists	1	1-3	1

As seen above, the first 1000 words represent 78-81% of the written text coverage while the same level of word meets 81-84% of the spoken coverage. The second 1000 has a percentage range of 8-9 for the written texts, while it represents 5-6% of coverage for the same level of words. The remaining levels relatively have a less contribution to the total coverage range as seen in Table 6. The results given in Table 6 are also crucial to be known as they are representative of the vocabulary size test administered in this study.

All these advocacies of the importance of vocabulary, the dimensions of knowing a word, the average coverage for the levels of words dwelt on have polished the need to mention learning strategies in the next title.

### **Vocabulary Learning Strategies**

A large body of literature resides in the taxonomy of VLS (Schmitt & Schmitt 1993; Schmitt, 1997; Nation, 2001; Fan, 2003; Gu, 2003). Being the first in the categorization of these strategies, Schmitt and Schmitt (1993) distinguished learning a new word item and retrieving it. After a decade or so, Gu (2003) labeled VLS as cognitive, metacognitive, memory and activation strategies. Another frame was also created by Schmitt (1997), who developed his categorization on Oxford's (1990) work, composed of determination strategies, social and consolidation strategies comprises social, memorization, cognitive and metacognitive strategies. Another conceptualization study was conducted by Fan (2003) who revised Gu's

(2003) frame and divided VLS into a “primary category” which contains dictionary strategies and guessing strategies as well as, “remembering category” which integrates repetition, association, grouping, analysis and known words strategies (Asgari & Mustapha, 2011).

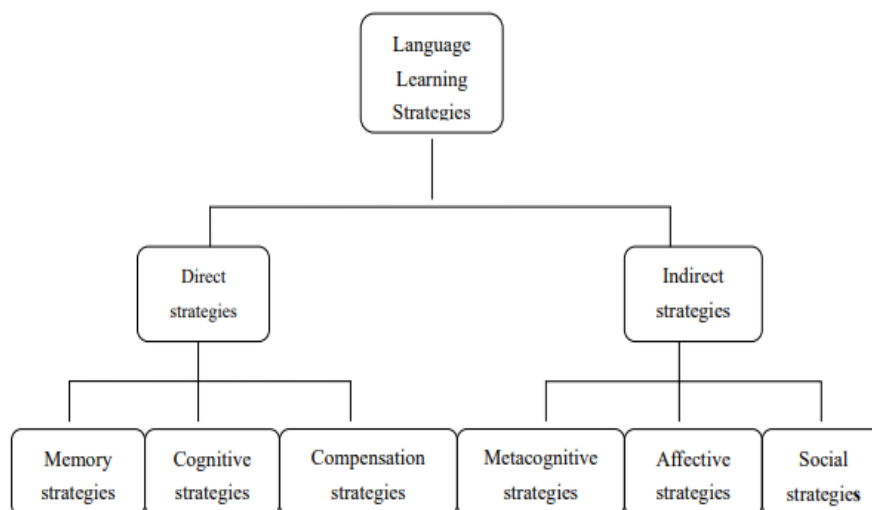


Figure 5. Oxford's (1990) classification of language learning strategies

The categorization of the strategies does not necessarily need to have a clear frame, however what matters is the use of them to enhance the vocabulary learning. No matter how much the importance of active student engagement has been highlighted for mastering a second language, the crucial relation of the “four vocabulary learning partners (students, teachers, materials writers, and researchers)” (Schmitt, 2008, p. 329) should be kept in mind. In order to achieve a sufficient level in L2, there should exist a profound relation and contribution of each part. Schmitt (1997, p. 205-210), as shown in Figure 5, groups VLSs within five subcategories under two main strategy types presented as in the following:

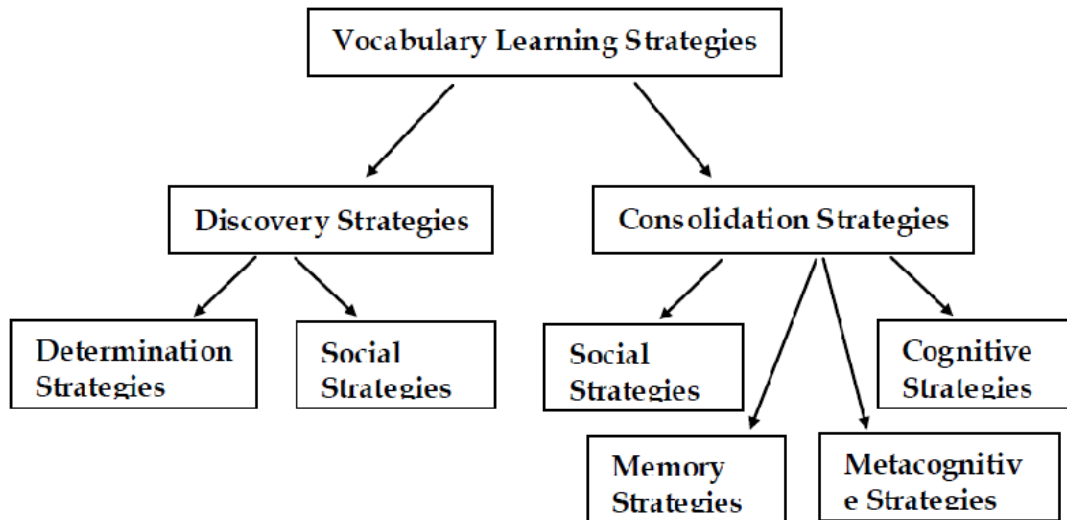


Figure 6. Taxonomy of Vocabulary Learning Strategies by Schmitt (1997)

As seen in Figure 6, Schmitt (1997) analyzes VLS into two major compartments: (1) discovery strategies are mainly discovering the meaning of the new words while (2) consolidation strategies stand for remembering the words once their meaning has been discovered. Within the discovery strategies, determination strategies refer to the strategy types used by the language learners to extract the meaning of the word on their own whereas social strategies cover creating some interaction with their surroundings while trying to find the meaning of a word. Consolidation strategies bear social, memory, cognitive and metacognitive strategies. Social strategies refer to learners' learning through interaction with others while cognitive strategies are basically focused on the mechanical means rather than the mental processing (Schmitt, 1997). In memory strategies learners base their learning on the prior knowledge that they have in their background and associating the new word items with the previous ones. And lastly metacognitive strategies are characterized as "a conscious overview of the learning process and making decisions about planning, monitoring or evaluating the best way of study" (Schmitt; 1997, p. 205).

Of all the types of VLS, this study makes of memory strategies categorized by Schmitt (1997) which are tabularized in detail in Table 7:



Table 7

*Memory Strategies by Schmitt (1997, p. 207-208)*

Strategy group	Strategy
MEM	Study word with a pictorial representation of its meaning
MEM	Image word's meaning
MEM	Connect word to a personal experience
MEM	Associate the word with its coordinates
MEM	Connect the word to its synonyms and antonyms
MEM	Use semantic maps
MEM	Use 'scales' for gradable adjectives
MEM	Peg method
MEM	Loci method
MEM	Group words together to study them
MEM	Group words together spatially on a page
MEM	Use new word in sentences
MEM	Group words together within a storyline
MEM	Study the spelling of a word
MEM	Study the sound of a word
MEM	Say new word aloud when studying
MEM	Image word form
MEM	Underline initial letter of the word
MEM	Configuration
MEM	Use Keyword Method
MEM	Affixes and roots (remembering)
MEM	Part of speech (remembering)
MEM	Paraphrase the word's meaning
MEM	Use cognates in study
MEM	Learn the words of an idiom together
MEM	Use physical action when learning a word
MEM	Use semantic feature grids

As evident in Table 7, memory strategies are related to retention and retrieval of the words already discovered. It is one of the most common problems prevailing L2 learners in that they lose the words newly learnt fast from memory. Vocabulary knowledge requires a good memory, that is, a good memory work. To provide L2 learners with a sufficient memory practices will immensely improve their capacity for learning new words. With all these reasons, memory strategies have been the core strategy type of this study. To effectively benefit from VLS has

proven to yield positive results with regard to high achievements in L2 learners. In that respect, proficiency levels of the L2 learners should be of great importance for a true mastery of the L2. It is widely-accepted that no matter how much they know the grammar of their L2 courses, they can never become proficient enough of L2 if they do not have rich word knowledge. To enhance an efficient degree of word knowledge, L2 learners are to make use of VLS in a sufficient way.

### **Theoretical Framework of the Study**

SLE is a realm that addresses to the schooling of the people within the domain of social sciences. The branches of social sciences and positive science differs greatly in terms of their research fields in that while the former focuses on the person, the latter mainly studies the natural phenomena. In that regard, Robson and McCartan (2011) make the distinction between Positivism taking place in natural sciences and Constructivism prevailing in social sciences. While Positivism seeks for the ultimate verifiable proof within everything it searches, Constructivism is characterized more within the socio-cultural aspect of the knowledge building. The schemata of people, according to Constructivism, are framed in the way we construct our knowledge around the experiences and interactions we experience within our environments. Therefore, being a social science research, this study will be heavily relying on the practical part taking place in reality rather than drawing on the philosophical aspect of the scientific proof as in natural sciences. The years 1960s and 70s witnessed a more process oriented approach rather than the previous product oriented trend (Crandall, 2000; Freeman, 1989; Abednia, 2012). The behavioristic approach left the learners in grave shade during their learning to discover the meaning and situate it around the schemata of theirs. The theorists have mostly been in full agreement that the issue of generation of meaning of language learners is crucial if we are talking about effective teaching practices. Riordan (2018, p. 17) draws a definitive line between the two approaches and more than the product the process of the learning is at focus.

## Related Works

**Studies conducted abroad.** A number of researchers of second language teaching dedicate a great deal of time to recommend possible and effective routes for learning languages. In almost all of them, they gravely demur a slight disregard of autonomy as a facilitating factor for learning and developing vocabulary. Some of these socially-grounded studies are annotated as in the following:

A recent study by Haddad (2016) investigates the juxtaposition of learner autonomy and vocabulary learning in classroom. He makes a point in the fact that in order for us to have more successful students we need to foster learner autonomy. Making a point in the fact that students' "exposure to the target language is limited in university classes" (p. 784), he emphasizes the importance of students' needs, interests and motivation in fostering learner autonomy. He suggests that teachers do not have to teach all the vocabulary items to the students, instead it will be more effective in the long run if the students are enabled to discover the strategies they can make use of during language learning. An active engagement in learning tasks was noted as vital for vocabulary learning, which generally is a rather complex and demanding task. At this point Haddad (2016) focuses on the application of autonomous learning in vocabulary learning. He extensively states sound reasons for the need of learner autonomy in vocabulary learning, noting that not all words can be taught by the teachers; therefore, students are to have responsibility and ability for the conduct of out-of-class studies by themselves. The paper proposes that teacher roles for fostering learner autonomy is indispensable for gaining students the awareness about their capacities and abilities so it will be vital for their academic success at any future educational setting ahead. However, "behavioral intensity, emotional quality, and personal interaction" (p. 787) are quite important for learning to take place.

Vela and Rushidi (2016) have recently studied a model that makes use of vocabulary notebooks. 90 students from different ethnic backgrounds at a Macedonian state university majoring at non-English departments but taking English courses in the Language Centre took part in the research. The participants were all intermediate students and they were divided into three groups: one the treatment group, the other two being the control groups with a number of 30 with

each group. The study was a single-term one covering 10 weeks of the academic semester. All the students were given a vocabulary test composed of 90 target words in English and the treatment group students were given a questionnaire on their attitudes on the vocabulary notebooks. The findings show that compared to that of the control groups' the gain scores of the treatment group which made use of the vocabulary notebooks prove to be incredibly high in the vocabulary size test. Some 15% students of the treatment group stated that they would be still using the vocabulary notebooks after the research is completed. However, the authors note that during the conduct of the study learner autonomy was not observed. That is, the use of vocabulary notebooks could not suffice for promoting learner autonomy in the students. It is suggested that teachers should provide students with more autonomy-promoting methods. This single-term study could not be long enough to foster autonomy to an observable degree, so a longitudinal study will be more beneficial for fostering learner autonomy in language learners.

In a similar study, Hozayen (2011) conducted a research which ran a mixed method on the readiness for autonomy in engineering students who studied English for specific purposes (ESP) at an Egyptian state university during the academic year of 2008-2009. She utilized Cotterall's (1999) language attitude questionnaire which was previously adapted by Youssef (2006) composed of four basic subcomponents: the role of the teacher, role of the learners and their sense of self-efficacy, and the role of feedback (Cotterall, 1999). The questionnaire was administered to check students' attitudes on language learning at a web-based setting. What Hozayen (2011) found in the results was that although the students believed that English was necessary for them to learn, they were not autonomous in their learning process. The author mentions that education in Egypt is a traditional one in which students appear in a "norm of examination-oriented and teacher-centred" context (p. 118) so the students were depended on their teacher and did not go online courses on the Internet (p 119). The participants were of Egyptian origin, of moderately-well doing families with parents being physicians, engineers, officers and companies employees (75% of the total), and she highlights that despite this, they do not have an optimal level of readiness for autonomy, and to the author, it could be explained by the cultural background of the students. The Middle Eastern cultures, like Asian cultures, tend to shy away

from an independent conduct of act in educational settings compared to the European peers (Hozayen 2011; Ellis, 1996; Holliday, 1994; Kramsch & Sullivan, 1996; Pennycook, 1989). Despite this, from the semi-structured interviews the author found that the participants showed an enthusiasm for autonomy. Therefore, the educators and the administrators are suggested to formulate new paths to promote autonomy in the learners and encourage them to take more action in this process. The article proves that students were not autonomous learners and yet their responses to the interview questions yielded that they had “confidence, ability and willingness which are key elements to become autonomous” (Hozayen, 2011, p. 121).

Much literature on learner autonomy though instills that a specific training is crucial to enliven it, some researchers agree that the readiness level of the students for autonomy matter tremendously for it. One example is a research conducted by Chan, Spratt and Humphreys (2002) for Hong Kong tertiary students' attitudes about autonomy. Appointing a large-scale survey the researchers picked 508 undergraduate students from a number of academic departments at Hong Kong Polytechnic University. A mixed-method design was employed to collect data. For the quantitative data a student questionnaire with the sections of (a) students' perceptions of their responsibilities and the teacher's; (b) students' perceptions of their decision-making abilities; (c) students' motivation level; and (d) students' autonomous language behavior and for the qualitative data follow-up interviews were conducted. The authors reported that though the students responded with a positive attitude towards autonomy it is hard to miss that they had an insufficient degree of motivation to take charge of their own learning (p. 13). The paper also reveals that Asian students tend to have a less motivated attitude for having a complete control over their own learning (p. 13), which is in line with the literature in comparison with their European peers. Another result of the analyses showed that students' perception about their teachers is quite traditional in the sense that they adhere strict roles to their teachers, which also indicates that they are not autonomous yet to take charge of their own learning. Rather than taking action and responsibility of their own learning, they take teachers as the main roles for it.

Shams (2013) carried out a research with 10 advanced English language learners at an Iranian university checking the influence of a hybrid course on their autonomy level and their vocabulary size. Basically what she focused was whether hybrid learning facilitated vocabulary learning in Iranian advanced English language learners and to examine whether self-directed learning took place in regard to their planning, monitoring and evaluating their performance during the course. To hold such a course, the teacher researcher made an announcement on the bulletin board at the beginning of the term and also distributed flyers and 10 students volunteered to take the course. Apart from a course weblog the students also made use of online dictionaries and various vocabulary-related websites during the course. Being a mixed method research, the quantitative measurement instruments were a vocabulary test and an autonomy questionnaire and as for the qualitative data collection tools weblog observations and students' reflective essays were administered. The students were given 200 Farsi words and asked to write their English equivalents at the beginning of the term; the vocabulary items that students did not know were focused during the course and rather than a pretest and posttest path at the end of the course the vocabulary gain scores of the students were checked via the vocabulary test. The findings yielded that students showed 83.3% (Shams, 2013, p. 1591) improvement in their vocabulary size at the end of the course and also their attitudes towards autonomy grew positively. For shouldering responsibility in their learning the researcher reported planning, monitoring and evaluating their performance, which are main components of self-directed learning in the related literature. What is more the researcher suggested the need for training the students for CALL and self-directed learning. It is important for both the students and teachers to get more fruitful results at an English language teaching programme with such a shared effort.

In a recent study, Tran and Duong (2018) try to explore EFL students' perceptions about factors influencing learner autonomy at a Vietnamese university. The participants were 35 students majoring at English language department. The data were gathered at Writing III course, which had the purpose of qualifying the students with academic writing skills. As the students had previously taken the courses of Writing I and Writing II they had already familiarity with the course. The researchers had the students use a writing portfolio for 15

weeks and submit it to the teacher at the end of the term. What the analyses of the study uncovered was in line with the related literature in that Asian students had a positive attitude towards autonomy and yet they were not actively autonomous (Tran & Duong, 2018, p. 1). The use of portfolios was found to be beneficial by most of the students for their learner autonomy improvement; attributing most of their success in the course to the self-directed learning they also largely benefitted from self-reflective essays along the weeks. The interviews showed that while some students admittedly uttered that they discovered their capacities in language learning and had awareness about their strengths and weaknesses, the others stated that they did not find it helpful as they felt they were lost in the midst of the activities meant to be fulfilled in a self-directed manner. This finding takes us to the fact that Asian students are, in strong agreement with the related literature, not autonomous to take direct control in their own learning. Like the researchers suggest training for autonomy development and encouraging self-directed learning can be recommended to facilitate language learning and empower the students to grow autonomous in their learning.

Kritikou, Paradia and Demestichas (2014) aim to scrutinize the web-based vocabulary learning in students who were learning Greek language as a second language. The participants were 15 randomly selected high school students aging between 16 and 17 years old. After the conduct of the pilot study the findings yielded that all students benefitted from e-learning to a considerable degree.

Nguyen (2014) in her doctoral dissertation tries to find whether Vietnamese teachers are familiar with the concept of learner autonomy and how it influences their teaching practice. Although there is a growing body of literature on the learner autonomy, research on how to foster learner autonomy awareness in teachers in Asian countries and teacher beliefs as forming their attitude towards the concept of learner autonomy have been underresearched. The researcher made use of both quantitative and qualitative data collection tools. The findings of the study yielded that Vietnamese teachers were not aware of learner autonomy as a concept, and what is more, their teaching practices were influenced by such beliefs of the teachers. The results were hoped to be beneficial for the administratives, policy makers as well as the teachers to take action in the realm of teaching practice and gaining more insight about the learner autonomy.

**Turkish case studies.** Kök and Canbay (2011) conducted a study on 34 preparatory class students at a Turkish state university about their use of Vocabulary Consolidation Strategies during 2009-2010 academic year with Paul Nation's (1990) Vocabulary Level Test. The authors found out that there was a statistically significant difference between the control and treatment groups in terms of their vocabulary gain scores at the levels of 1000B and 2000B at the end of the study while 1000A yielded no significant results. The paper is concluded that the significance in the results are due to the training provided to the students of the experimental group.

A recent Turkish case study also dwells upon the urgent need for autonomy training in language learners. In her paper, Dişlen (2011) examines university students enrolled at different departments ranging from Engineering to Fine Arts and studying ESP. Using a mixed method design, she worked with 210 participants for administering Engel's (2003) Autonomy Learner Questionnaire and 24 participants for conducting a semi-structured interview. What she found out was that students were rather traditional in the sense that they heavily relied on their teachers during their language learning process. The data analyses, however, indicated that though students were subjected to traditional language teaching along their schooling years, they bore positive attitudes towards learner autonomy. Therefore, if the teachers and school administrators provide students with sufficient autonomy training, the students can enjoy the opportunity for an optimum degree of independence in their learning which will act as a facilitating trait during their language learning process. The reported findings about their willingness for autonomy also flag the urgent need for autonomy training. The author indicates that this will enable students get more proficient in the language which is the ultimate aim of all the second language teachers and educators.

Yıldırım (2008) investigates the readiness level for learner autonomy in one of his studies. In that regard, a group of 103 Turkish university students participated in his research aged between 17 and 21. As a measurement tool he adapts Chan, Spratt, and Humphreys' (2002) questionnaire, and after certain changes he comes up with forty-three items to be utilized with a Likert-type 5 point scale. The tool is composed of three sections: (1) students' evaluation of their own and their teachers' responsibilities in the language classroom, (2) asked about



students' confidence in their ability to operate autonomously, and (3) focused on students' actual practices of autonomous learning practices outside the classroom. The results of the study yield that there is a statistically significant relationship between students' autonomy perception and responsibilities of their teacher. Another noteworthy result of the study is that students have a positive attitude towards learner autonomy. This is highly crucial as this positive attitude indicates how ready the students are for fostering learner autonomy. Some other findings of the study uncover that students already conduct some autonomous tasks outside class. All in all, the study concludes students are ready to take responsibility in their own learning process and suggests that upon pinpointing the readiness level of the students, they should be encouraged to take more action along their learning experiences.

Gökgöz (2008) makes an investigation of the relationship between learner autonomy level, success in speaking course and the use of language learning strategies for coping with speaking anxiety with 102 students at a state university in Turkey. She gives students questionnaires on speaking anxiety of the students and their level of learner autonomy. Upon quantitative calculations of the dataset, the researcher finds that students who scored higher than the others in speaking class were more autonomous than the ones who scored lower and similarly they were good users of strategies. There was a relation between the high-achievers and low-achievers in regard to their use of strategies and the level of learner autonomy. In other words, high-achievers at the speaking course were also successful users of language learning strategies and they had a high level of learner autonomy while low-achievers in the speaking course relatively performed poorly in both using language learning strategies and also happened to have a low level of autonomy.

In one of her studies, Üstünlüoğlu (2009) aims to explore the perceptions of students and teachers' at a Turkish state university about their taking charge of their own learning and their capabilities for autonomous learning both in and outside the class. 320 students and 24 teachers volunteered in the study which utilized both quantitative and qualitative research methods. The findings of the study demonstrated that the students were not autonomous to take responsibility of their own learning, and supporting this result, teachers were found to be mostly

in charge and control of the entire process, by regarding their students as poorly sufficient to take charge of their learning. The researcher recommends a programme to be implemented into the curriculum so that both the learners and the teachers could benefit from it for an enhanced learning outcome.

Öğmen (2011) conducts a study with high school students with the aim of exploring their vocabulary learning strategies and its relation with their learner autonomy levels. In that regard, 89 9<sup>th</sup> grade students kept e-portfolios for 24 weeks and pre- and posttests were applied to explore the difference. For all weeks students took 12 vocabulary tasks and the interviews were carried out with the most active students. Both the quantitative and qualitative results of the study demonstrated that more than 67% of the students were content with the implementation, and computer-based vocabulary tasks helped them to develop more interest in the new vocabulary items. While conducting the tasks, students attained new vocabulary learning strategies, which supports the finding that e-portfolios enhanced the use of vocabulary learning strategies and also promoted learner autonomy of the students.

### **The Need and Importance of the Study**

Given the vast accumulated literature on the necessity, efficacy and need for incorporating technology use into second language teaching, second language teachers' education programs will need to integrate courses on effective utilization of educational technologies into their curricula. Likewise, most of existing courses need to be reviewed so as to open room for utilization of technology into their subjects.

Use of technology can be utilized in such effective ways as to enable:

Acquisition, (reading, watching, listening Inquiry: using resources to develop an evidence-based output); discussion (debating, questioning, answering, negotiating ideas); practice (acting, in the light of feedback, to achieve a goal or output); collaboration (working with others to achieve a joint output); and production (making something for others to evaluate against). (Laurillard, 2014, p. 9).

## **Conclusion**

This chapter articulated views over the use of technology in second language learning. Specifically, it discussed the interjunction of a WBC teaching with the development of learner autonomy, e-learning readiness level, use of VLS and the vocabulary size of ELT students. Literature bears many studies advocating web-based language teaching, while many others caution us that we should be more careful in integrating technology in our courses rather than having a total dependence on it. The drive behind this research was the gap found in the field of ESL and EFL in the context of Turkey.

It is followed by the chapter which presents the methodological basis of the current research.

## **Chapter 3**

### **Methodology**

This chapter articulates the methodological design of the study. It begins by outlining the research design, study group and setting, and data collection tools. The specifics of the procedure of the data collection are discussed next and the chapter concludes with an overview of the data analysis method.

#### **Research Design**

The purpose of this study was to unearth and display the influence of WBC use on the development of learner autonomy, e-learning readiness, use of vocabulary learning strategies and vocabulary size development of fresh year students majoring at English Language Department. Of mixed research designs, the study is an embedded mixed research method, in which both quantitative and qualitative data are traditionally collected and analyzed. In this type of mixed research method, researchers are able to add a qualitative part such as a case study into a quantitative study such as experimental or vice versa (Creswell & Plano-Clark, 2015). This approach was chosen to provide a multifaceted understanding of complexity of data in its context. As for quantitative part of the study, it is a quasi-experimental research comparing gain scores of the experimental and control groups. Quasi-experimental designs do not include the use of randomly assigning participants to the test group. In this design, instead a group is randomly assigned to receive the experimental intervention (Fraenkel, Wallen & Hyun, 2012). As for qualitative part, content analysis was preferred. Content analysis is a method of analysis of communication to study human behavior in an indirect way (Fraenkel *et al.*, 2012).

This study relies on triangulation method to draw more on a variety of data sources in that triangulation yields more sound results in regard to illuminating the present phenomena. From the types of triangulation “data triangulation, observer triangulation, methodological triangulation, theory triangulation” (Denzin, 1988), “method triangulation, time triangulation, observer triangulation, theory triangulation, space triangulation, and the combined levels of triangulation” (Cohen, Manion & Morrison, 2018/2000), this study makes use of data

triangulation in the sense that more than one method of data collection such as interviews, scales and achievement tests were used.

### Setting and Participants

The data of this study were collected from 165 volunteer fresh-year students majoring at the English Language Teaching Department at two large-scale state universities in Turkey during the Spring term of the academic year 2017-2018. The convenient sampling method was used in this study. Namely, the researcher collected the data from the places easily reachable without a random selection procedure from a population, affecting the generalizability of the study adversely (Fraenkel *et al.*, 2012). Despite not having a random selection procedure, populations with similar characteristics were considered as the study groups of this study. For example, it might be fresh-year students majoring at English Language Teaching departments at large-scale universities in Ankara or other metropolitan cities. To facilitate this process, some salient background characteristics of the study group are presented in both Table 8 and Table 9.

Table 8

*Frequencies and Percentiles of the Study Group by Various Variables*

Variable	Category	Hacettepe University (Control)		Gazi University (Experiment)		Overall	
		<i>f</i>	<i>p</i>	<i>f</i>	<i>p</i>	<i>f</i>	<i>p</i>
Gender	Female	86	81.1	36	61	122	73.9
	Male	20	18.9	23	39	43	26.1
High school type	Teacher	35	33	16	27.1	51	30.9
	Anatolian	67	63.2	37	62.7	104	63
	Other	4	3.7	6	10.2	10	6
PC ownership	Yes	93	87.7	55	93.2	148	89.7
	No	13	12.3	4	6.8	17	10.3
Preparatory school	Attended	78	73.6	36	61	114	69.1
	Not attended	28	26.4	23	39	51	30.9
Total		106	100	59	100	165	100

*f=frequency, p=percentile*

As seen in Table 8, in both experimental and control group mostly females ( $f = 122, p = 73.9$ ) comprised the study group. It is noteworthy that the number of females at Hacettepe University ( $f = 86, p = 81.1$ ) is considerably higher,

compared to that of at Gazi University ( $f = 36, p = 61$ ). Besides, most of the participants graduated from an Anatolian high school ( $f = 104, p = 63$ ), whereas slightly less than one-third of the participants graduated from a teacher training high school. Anatolian high schools' education is mainly focuses on the aim of preparing students for any of the professions ranging from engineering to law from medicine to business. What these schools have been innovative about was the introduction of an additional high school preparatory class at the beginning of its three-year lasting education. In the first year a 25-hour English language intensive program was run to teach English, at a few of them French and German. The remaining three years were studied in two paths: the students become 1<sup>st</sup> graders after the prep class, and they take a bunch of general aptitude and general knowledge courses along the following three years.

As for the Anatolian teacher training high schools their foundation dates back to the 1920s. In 1923, with the foundation of Turkish Republic 20 Teacher Schools called "Darülmualimin" were giving education in the national domain, they were later called "Muallim Mektebi" (Teacher Schools in Old Turkish) and lastly in 1935 they were named as "Öğretmen Okulları" (Teacher Schools) (Eşme, 2001). Along the years Anatolian teacher training high schools have gone under great change, and in 2014 they were all terminated with a national law by the government. Some participants of this study are the last graduates of these schools, so we had better take a look at some of their basic characteristics: The education students received at those schools was a four-year training: one year of preparatory class and three years of academic and teacher training education. The national education system provided those students with a boarding and scholarship opportunity which was quite appealing for both them and their families. The students graduating from those high schools had already a certain level of eagerness and aptitude for the profession of teaching. Therefore, they would get extra points if they would choose a teaching department at a university in their field. Moreover, students accepted to a faculty of education at a state university were also granted a free scholarship if the programme they were to be enrolled was in their first five options. In sum, the graduates of Anatolian teacher training high schools started to take lessons on education and specialize in educational sciences much longer than they started their undergraduate years. With the

dissolve of these schools in 2014, there have been three major types of high schools in Turkey: Science high schools, Anatolian high schools and social sciences high schools giving high school education for the national and longitudinal objectives.

In the study group of the current research an overwhelming majority of the participants had a PC ( $f = 148, p = 89.7$ ). And most of the study group attended a preparatory school ( $f = 114, p = 69.1$ ) for one year immediately after they pass the university examination. It draws attention in Table 8 that more students attended preparatory school at Hacettepe University ( $f = 78, p = 73.6$ ) than those at Gazi University ( $f = 36, p = 61$ ). The preparatory school is an optional one for the students who are non-English or non-foreign language major. That is, students of ELT have to take a proficiency exam at the beginning of the semester, and if they score a pass mark (65 over 100) they directly continue with their department as fresh year students. The proficiency exam for both universities is one that measures the level of English of the students with four basic skills: reading, writing, listening and speaking. Students in the morning sit the first session of the written exam (for reading, and writing) and in the afternoon they take the second part (for writing) on the same day. And on the second day each student is appointed a certain time posted on the website of the foreign languages school and take their 10-minute speaking exam. The speaking exam is conducted by two instructors and scored separately. Students' speech is recorded on a laptop in case of a disagreement over the score or any other unexpected objection by the party of the students. Like the speaking part the other exam papers are read by two scorers and the average of two marks becomes the final score of the student. The students who cannot get 65 out of 100 will be registered to prep school for a year. In the end of the first semester, however, if they get a score of 65 from their mid-term exam they are entitled to move to their department as irregular students. Prep school students get an intensive English language program. The students who fail to get 65 are not randomly assigned to the classes: each one is listed in the classes according to their level of English, which they took from their proficiency exam. Apart from the language department students, non-language department students are also assigned in the same way as the language students. However, the language and non-language students do not get into the same class

even if they get a similar score. That is, the grouping is maintained within each category of students. Prep school students take 25 hours of English teaching per week and have to attend the courses as out of the whole class hours 30% is the limit for not failing the course. The academic term is mainly composed of 14 weeks, and student absence over 20% of the entire course hours in a term will fail the student. Besides the required attendance the students also have to sit quizzes, pop-quizzes and get some credits from participation to the lesson, all of which also has the weight of up to %10 for the overall passing score of the student at the end of the term. Students take the final exam at the end of the academic year, which is quite similar to the one they received at the beginning of the term in terms of its level, operation and scoring. The ones who get a passing grade (65 and higher out of 100) complete their prep school and directly start their department next academic year. In addition to some background characteristics, In addition to central tendencies of some other salient characteristics of the study group are given in Table 9.

Table 9

*Means and Standard Deviations of the Study Group by Various Variables*

Variables	Hacettepe University		Gazi University		Overall	
	$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>
Age	19.301	1.332	20.182	3.909	19.552	2.382
Ösym score	462.205	4.941	439.212	9.433	455.664	12.276
*Family income	3784.940	2009.228	3180	2011.276	3612.845	2019.733

\*Turkish Lira

In Table 9, it is clearly seen that ages of the participants at both universities are alike and have a mean of 19.552 and a standard deviation of 2.382. Being prestigious state universities, both located in Ankara province (the second largest city in Turkey) and sharing a long history, the acceptance score for both universities is quite high. Yet, the participants enrolled at Hacettepe University ( $\bar{x}$  = 462.205, *SD* = 4.941) have higher University Entrance Exam scores than those enrolled at Gazi University ( $\bar{x}$  = 439.212, *SD* = 9.433). 560 is the highest score that a student can get from the university entrance exam with all the correct answers and with the addition of high school GPA. So 439 points, for an English



language student, stand for more than two thirds of all the questions' being correctly answered.

As for family income, the participants at Hacettepe University ( $\bar{x} = 3784.940$ ,  $SD = 2009.228$ ) have remarkable higher family income compared to those at Gazi University ( $\bar{x} = 3180$ ,  $SD = 2011.276$ ). It should be pointed out here that net legal minimum monthly wage is 1603 TL in Turkey as of 12/09/2018. Therefore, participants' families earn approximately double of it.

This study collects the data from two large-scale state universities in Ankara, Turkey. The foundation of Gazi University dates back to the 1920s, with the name of "Middle School Martial and Training Institute" then "Gazi Secondary School and Education Institute" (1929), "Gazi Education Institute" (1976) and finally "Gazi University" (1982). Having a long history behind the university has 11 faculties, 5 graduate schools, and 3 vocational colleges giving education in number of fields ranging from Education, Medicine, Dentistry, Pharmacy, Health Sciences, Science, Engineering, Architecture, Technology, Sports Sciences, to Applied Sciences. Gazi University has around 37 thousand students from Turkey, and 1500 foreign students from different parts of the world ("Gazi University History," n.d.).

Hacettepe University whereas began its history in the domain of health education. In this regard, the date traces back to 1954 when the child health institute and hospital was opened as a part of Ankara University Faculty of Medicine. However, it is not before 1958 that the health departments of the university began to be opened one by one along the following years. Hacettepe University has 14 Faculties, 15 Graduate Schools and Institutes, 2 Applied Schools, 1 Conservatory, 4 Vocational Schools, and 98 Research and Application Centers within the scope of the Law No: 2809 for the Organization of Higher Education Institutions, enacted in 1982 ("Hacettepe University: History," n.d.). The university has 50000 students as of 2018 July.

Like their general history, both universities' ELT departments have a long history: Gazi University ELT was first founded as Gazi Institute of Education English Language Teaching Department in 1944 which was composed of 2-year education programme. Later in 1966, the period was extended to 3 years, and

finally the institute joined Gazi University Faculty of Education and began to complete the education in 5 years within the Department of Foreign Languages Education. Hacettepe University ELT Department, whereas, was founded in 1985, and since then offers education as a division under the Foreign Language Education Department within the Faculty of Education. For both universities prep school is compulsory for all English-majoring students. They have to either succeed in the proficiency exam conducted by the school of foreign languages at the beginning of the academic year or attend the prep class for a year. The ones who get a high score at the end of the fall term of the academic year are also entitled to start their education in their departments. The ones who still cannot get a passing mark have to pass it at the end of the academic year. After the prep school the following 4 years, students are required to succeed in a variety of linguistic, pedagogical and two nationally compulsory courses (1) Ataturk's Principles and History of Turkish Revolution, (2) Turkish Language. Besides these compulsory courses, students are also allowed to take a variety of courses according to their interests from different faculties and even other universities. Each year with the university entrance exam both universities accept more than 100 students to the programme, (Gazi ELT: 150 students; Hacettepe ELT: 110 students) and after graduation the students are able to apply for job positions as English teachers at primary and secondary school levels at both state and private schools, as translators, interpreters and also as instructors at prep schools of universities. Both departments have the opportunity of exchange programmes for their students: Erasmus for foreign country exchange, Farabi for the domestic exchange programme across Turkey. Thus both universities encourage their students to benefit from such opportunities during the schooling period of their students. Both departments have been successful not only for the undergraduate programme, but also the graduate programmes that they offer at the level of master and doctorate.

Below is given the 2017 statistics of the acceptance scores of both universities for the Department of English Language Teaching:

Table 10

*Statistics of the Acceptance Scores of Both Universities for the Department of ELT of Year 2017*

	Number of students accepted	Lowest acceptance score	Highest acceptance score	Type of score accepted
Hacettepe University	100	458,28570	504,72597	DİL1** (Foreign language)
Gazi University	130	434,28790	473,09685	DİL1** (Foreign language)

\* \* Shared by Measurement and Placement Centre at home page of [www.osym.gov.tr](http://www.osym.gov.tr) \* \*DİL1 refers to the score weight to be choosing either English, French or German departments.

From Table 10 above it is easily seen that students of Hacettepe University are slightly high achievers (scored between 458 and 504 points) compared to those (scored between 434 and 473) of Gazi University. The statistics presented above also highlights that ELT students are to be accepted to their programme according to their foreign language scores at both universities.

Perhaps a few words will be beneficial in order to describe the characteristics of Foreign Language Exam taken by these students: The exam was composed of 80 questions to be answered within 120 minutes, and despite being a language proficiency exam, this exam did not cover any questions for checking writing, speaking or listening skills. Students were only assessed by their perceptive skills, what was measured was only reading comprehension, grammar and vocabulary knowledge. That is why, most of the students fail at the proficiency exam at prep school despite scoring moderately at this exam. And it is also common to see students who opt for attending preparatory classes to improve their listening, writing, and speaking skills even if they score very well on this exam.

In order for them to be accepted to the program they have to record a high score in both exams. The students accepted to these programs are to take compulsory courses like advanced reading, writing, speaking and vocabulary. This

is a significant point about this research in that participants are still English-language learners.

## **Data Collection**

The data were gathered via both quantitative measurement tools such as scales and achievement tests and qualitative tools such as interviews. A total of six data collection tools were utilized in this study. The following measures were utilized for data collection.

## **Instruments**

**1. Personal information form.** A personal information form developed by the researcher was used (See Appendix H). The form includes items seeking information about the participants' gender, age, university entrance exam score, type of attended high school, and family and personal income.

**2. Autonomy perception scale.** Autonomy Perception Scale developed by Demirtaş (2010) was used to measure learner autonomy levels of the students. The scale is made of 30 items on a 5-point Likert-type scale with responses ranging between "never (1)" and "always (5)." The scale was developed in Turkish with items such as "İngilizce öğrenme sürecimi planlarım." (Item 1), "Öğrenme etkinliklerim hakkında kendi yaptığım ya da başkalarından aldığım yorumları yazarım." (Item 18), and "Karşılaştığım yeni sözcükler, sözcük grupları, deyimler ya da yapıları not alırım." (Item 27) and is a single-construct scale. The researcher reports a reliability alpha coefficient of .89, while the standardized Cronbach Alpha coefficient value of the test calculated with the data collected in this study was found out to be 0.935.

**3. The e-learning readiness scale of university students.** In order to measure the participants' readiness for e-learning, The E-Learning Readiness Scale of University Students developed by Yurdugül and Demir (2016) was used. The scale is made of 33 items and 6 subfactors, namely, computer self-efficacy (Items 1-5), internet self-efficacy (Items 6-9), online communication self-efficacy (Items 10-14), self-directed learning (Items 15-22), learner control (Items 23-26) and motivation towards e-learning (Items 27-33). The items of the scale are on a 7-point Likert type scale, ranging from "1 (not at all me) to "7 (exactly me)". The

scale is in Turkish and some items are “Ofis programlarını (word, excel, power point, outlook v.b.) rahatlıkla kullanabilirim.” (Item 4), “İnsanlarla etkili iletişim kurmak için internet araçlarını (e-posta, tartışma ortamları, skype v.b.) rahatlıkla kullanabilirim” (Item 10), and “Dersleri internet ortamında öğrenme konusunda kendime güvenirim.” (Item 31). The researchers report an overall Cronbach Alpha reliability coefficient of 0.93, whereas it is calculated with the data collected within the scope of this study that it has a standardized overall Cronbach Alpha reliability coefficient value of 0.935.

**4. Vocabulary learning strategy scale.** Of Schmitt’s (1997) taxonomy of Vocabulary Learning Strategy Inventory, Memory Strategies Scale was used as the students mainly complain about forgetting the new word items while learning a second language. MSS were scrutinized in this study so as to provide some insight about the retrieval of the new vocabulary items. The questionnaire is composed of 27 items; all in 5-point Likert type items represented “Never (1)”, “Rarely (2)”, “Sometimes (3)”, “Often (4)” and “Always (5).” The standardized Cronbach Alpha coefficient value of the scale was calculated to be 0.884 according to the data collected in this study.

**5. Vocabulary size test.** There has been a considerable body of research linking use of e-learning with improved student achievement (Dennis, Çakır, Korkmaz, Duffy, Bichelmeyer, & Bunnage, 2006; İşıgüzel, 2014; Banditvilai, 2016). Particularly, as the youth of the era are incomparably more engaged in technology use in all spheres of their daily lives, it makes sense that incorporating technological means into traditional classroom language teaching will enhance student learning and thus lead to improved levels of achievement. In this study it is hypothesized that students who make use of WBC programs in their classes have larger vocabulary size as well as a higher level of e-learning readiness and learner autonomy, and frequent use of VLS.

To measure the vocabulary size and development of the students, a vocabulary size test developed by Nation (1997) was used. The test bears 10 questions by one band for each 1000 words. The test is divided into 14 bands making up 14000 words in English. As the sections proceed, the less frequent words come up. That is, each following section is relatively a harder one than the previous one for the L2 learners. In this respect, as the entire group participants

were of ELT department of two large-scale state universities, they had almost the same vocabulary size at the beginning of the study. However, as the levels increased the scores started to vary. That is why the first 6-level scores of the students were not included in the study, and the remaining 8 levels were computed and measured as a single score. The data collected in this study yielded a standardized Cronbach Alpha coefficient value of 0.902.

**6. Semi-structured interview form.** Semi-structured interview form is made of 11 questions. Questions of the interview were prepared by the researcher (Appendix F) and were formed according to the objective and research questions of this study. The questions were then checked by the field experts: 2 English language teachers, 3 doctorate students in ELT department, 2 professors in ELT department, 1 expert in measurement and evaluation department, and 5 ELT department sophomore students. According to their recommendations, changes were made in the wording of four questions and two questions were omitted for being irrelevant for the study's purpose.

### **Rationale of the Interviews**

The interviews were conducted at the end of the academic term to obtain students' opinions about their learning experiences, perceptions of autonomy, their self-awareness as a language learner and their attitudes towards the use of tools for language learning.

Consequently, Nunnally (1978) pointed out that Cronbach Alpha reliability coefficient must be at least higher than 0.7, and preferably 0.8. As seen above, all the reliability coefficients of the data collection tools meet this criterion.

### **Procedure of Data Collection**

First, written permissions from the developer/adapter of the scales to use them for academic purposes via e-mail were obtained. After obtaining the permissions, ethics committee for research at Hacettepe University was applied. A written permission indicating that the procedure of the study was fully ethical was also obtained from ethics committee. The pilot study was conducted after a certain preparation for the administration of the study plan and the proceduralized steps of the research were followed in this way: Initially, the copies of the measurement

tools were printed out, and then a classroom was arranged for the students and the researcher to come together. The students were all volunteering for the study (See Appendix G). The students were informed about the research and the value of their frank feedback on the conduct of the tools and the items. They were also asked to freely articulate the problematic points that they see unclear, ill-worded, or hard to comprehend. The completion of all the tools took around 60 minutes. The students shared that they had no unclear points in the tools utilized. As for the interviews, a different day was arranged in the same week within the same group. 5 students (3 females, 2 males) were chosen to carry out the interviews. Upon two students' asking for clarification over three questions, necessary changes were made in the questions, and were reworded for a clear understanding of each. Subsequent to this, the main implementation started. First of all, in the main implementation the control and experimental group were randomly selected. All the data were collected with paper and pencil. In the first week of the semester, the participants were administered pre-tests in the classroom where they regularly attended classes. These tools are personal information form, autonomy perception questionnaire, e-learning readiness scale, vocabulary learning strategies scale and lastly a vocabulary size test and they were administered in the order given. The administration process took approximately 60 minutes. Right before the administration of the tools, the participants were clearly informed by the researcher that participation is voluntary and the outcomes of measurement tools would not affect their final grade of the course by any means. Nevertheless, because of being an academic study, they were further informed that it was of prime significance for the researcher to obtain their actual aptitudes, so they were asked to do their best in the test, answer scales sincerely, and leave questions empty they did not have a clue. 12 weeks later, post-tests were administered. The same procedure for the pre-tests was applied for the post-tests. The participants were instructed to write either their names or nicknames on the tools so that the researcher can match pre-tests with the post-tests. 11 participants not having attended either one were excluded from the study sample.

Interviews were conducted before post-tests were administered. All interviews were conducted in Turkish language so that language barriers would not affect the results of the interview, and they were audio-recorded for later

transcription. Students gave their consents for audio-recording. Interviews were conducted in an isolated study room at the library and a classroom. Each interview took around 8 to 32 minutes depending on the participants' pace and length of responses. The participants gave consent to partake in the study with a signed form provided by the researcher.

The researcher was the unofficial assistant of the course that the participants enrolled at both Gazi University and Hacettepe University. Moreover, the researcher is also a research assistant at the English Language Teaching Department at Hacettepe University. She has not been the academic counselor of the control group or taught them any courses before or during the study. So all the students volunteered in the current study with no other intention but contribution.

### **Structure of the Courses**

In both control and experimental groups the same course was taught: Lexical Competence. At both universities the course was a compulsory one and delivered as a three-hour class time per week. For both groups the course required the students to regularly attend the class, with only 30% absence limit. For both universities the course was a single-term one and given to the fresh year students of the ELT department during the second semester of their first year. Both groups were instructed by English language lecturers and amongst the objectives of the course, in general, were development of the word knowledge of the students and preparing them for the following years in terms of their proficiency level (see Appendix A & B). The control group lecturer used only one vocabulary building book (See Appendix A) while experimental group lecturer made use of more than one printed or online source (see Appendix B) and their course content differed in terms of the subject distribution. In that respect the instructional method of the control group was traditional; mainly composed of teacher lecturing the students during the entire term. However, in the experimental group besides the vocabulary building book, a number of websites for corpus were used to check new words and have students work on their own outside the classroom too. For example, a new word to be learnt from the book was checked on the computer, which was set at the classroom setting, and the use of the word was listed on the corpus website to show the other uses, the collocations,



idiomatic expressions, and connotations of that word. The more students looked up at the different uses of the word, the more they were exposed to not only the meaning but also the contextual usages of it. In that regard, new words were not learnt just by their mere meanings, but also their uses and the phrases they came together to make were also shown to the students. The control group students did only follow the book for doing the exercises after the lecture of the instructor on the inflectional versions, suffixes, prefixes and infixes for the new words. Sometimes students would do the exercises by themselves and sometimes they would get in pairs to do them. The instructor would give them time to complete the task, and after they finished, students would raise their hands to read the next question. After almost each unit, students were asked to write a paragraph using the new words learnt within the unit. 10-15 minutes were allocated to write their paragraphs and then randomly selected students were asked to get to the stage to read it aloud to their classmates.

However, in the experimental group not only the exercise time was a less-time taking one but also students were more focused on the collocations and connotations of the words they were learning. Another difference between the groups was the assignment type: the control group was mostly assigned to do the exercises at home and expected to revise it for the next class whereas in the experimental group, students were to find at least three words from the corpus website and write the first three usages of them on a paper to be marked next class time. This regular assignment check made up 30% of the total score of the students at the end of the term. This application was also beneficial for the students as they kept writing in actual paper and pen, which also is an effective way to retrieve the word they studied. The students were left free to pick any word from the corpus and write example usages of them. This also enabled them to pick words according to their interests and practice writing in a regular conduct. The non-traditional aspect of the experimental group instructor also was on enabling the students to do assignments but within their interests, which also was also could be regarded as a way to induce and promote autonomy during teaching. Students were not freely lingering around nor were strictly tied by the firm restrictions and dominance of the lecturer either. Apart from the abovementioned

details and descriptions of both classrooms, to have a full image of the seating arrangement of the students, images can be found in Appendix C and Appendix D.

### **Quantitative Data Analysis**

Data management and analysis were performed using SPSS 23.0 package program by the researcher. As for a 5-likert type scale, the data which are “absolutely disagree” “disagree”, “no idea”, “agree” and lastly “absolutely agree” were transformed to corresponding numbers 1, 2, 3, 4, and lastly 5, respectively. E-learning readiness scale was itemized under degrees from 1 up to 7, each figure corresponding to an increase in the degree. For the achievement tests, only correct answers were given 1 point. That is to say, the participants did not get any point for the wrong answers and the empty questions. Wrong answers did not cancel out correct answers. After digitizing, the data were analyzed for the missing data. The missing data were imputed with the method of linear interpolation. Besides, reversed items were checked to be reversed in the data gathering tool. After that, the sums of factors and overall scale were computed by adding up all the items in the factor or overall scale.

Mean, standard deviation, frequencies, and percentiles were used to report the descriptive data. On the other hand, since the prime aim of this study is to compare two groups (experiment and control), MANOVA, MANCOVA and Mixed Between-Within Subjects Analysis of Variance tests were run. In order to be able to check the data for the suitability of the parametric tests, normality of the data was checked. Thus, *Kolmogorov-Smirnov multivariate normality tests* (Massey, 1951) were run:

Table 11

*Tests of Normality for Pretest and Posttest Scores*

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PreAutonomy	,072	165	,038	,984	165	,055
PreELearning	,034	165	,200*	,991	165	,411
PreVLS	,062	165	,200*	,993	165	,619
PreVocab	,059	165	,200*	,992	165	,465
PostAutonomy	,068	165	,061	,981	165	,026
PostELearning	,060	165	,200*	,989	165	,255
PostVLS	,058	165	,200*	,990	165	,299
PostVocab	,052	165	,200*	,988	165	,184

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 11 presents the results of Kolmogorov-Smirnov and Shapiro-Wilk normality tests. The Shapiro-Wilk test results revealed that of all the pre and posttest scores, only posttest scores of autonomy slightly violate the normality assumption ( $p > 0.5$ ) as it yielded a statistically significant result. However, as the population is a large one ( $N = 165$ ) normality results are not sensitive to the distribution (Pallant; 2010; pp. 83). The results of the tests showed that the data slightly violated the assumption of normality. However, Pallant (2010) advocates that this is highly “common in larger samples” (p.63) and suggests the use of a follow-up normal probability plots (Q\_Q plots) and if it has “a reasonably straight line” then it should be convincing enough that the data “suggests a normal distribution” (p. 63). Also, as suggested in Pallant (2010; p. 66), histograms, bar graphs, line graphs, scatterplots and boxplots as well as the Q\_Q plots are checked and it was seen that the data yielded a normal distribution though not a perfect one. Dörnyei (2007; p. 208), in support of Pallant (2010), also accepts a roughly normally distributed data as normal in social researches with relatively larger groups. Therefore, the requirement of a perfect line of data distribution can be dethroned in line with these references. Pursuing the normality check, all the variables were investigated and as presented in Appendix A and Appendix B, the data yielded to be normally distributed. The skewness (symmetry of the distribution) and kurtosis (peakedness of a distribution) of the data are also yielded to be within the standard values of -1,96 and 1,96, which is set to be accepted as normally distributed data with large samples (Tabachnick & Fidell, 2012; pp. 79).

These findings also hug the fact that the data can be parametrically analyzed. A statistical test of multivariate analysis of variance (MANOVA) and MANCOVA were conducted as parametric tests to show the differences between the groups. In order to detect the differences between and within the groups Mixed Between-Within Subjects Analysis of Variance test was run. The primal assumptions of the tests: normality, equality of variance and absence of univariate outliers were met. And for the secondary assumptions, which are absence of multivariate outliers, linearity, absence of multicollinearity and equality of covariance of matrices were also checked. None of these assumptions met any intolerable violations and the data were found to be suitable for employing MANOVA, MANCOVA and Mixed Between-Within Subjects Analysis of Variance for investigation of the research questions of this study.

There were only a few outlier participants, so they were discarded from the study group to better the distribution of the data for the normality fit. Besides, the researcher resorted to the use of a wide variety of data transformations such as logarithmic, square, square-root, and hyperbolic, yielding a tangible improvement. Consequently, MANOVA, MANCOVA and Mixed Between-Within Subjects Analysis of Variance tests were performed. 0.05 was set as significance level.

### **Qualitative Data Analysis**

As for qualitative data analysis, content analysis technique was employed on the ground that a rigorous analysis of the data collected requires an analysis of content. In content analysis, the unassigned themes, categories and codes are revealed. The aim here is to uncover the underlying meanings of the themes and codes by bringing them together and in the way that they can be interpreted by the reader (Fraenkel *et al.*, 2012). In this research, a method of inductive analysis was run as the qualitative data at hand were the foci (Patton, 2014). The audio-recordings of the interviews were transcribed into a MS Word document by the researcher. Transcriptions took a total of 61 pages. Following this, transcripts were scrutinized, first, the codes were found, then in line of these codes, themes (categories) were generated (Creswell, 2016; Patton, 2014; Merriam, 2013; Berg & Lune, 2015). The codes and themes were found by the researcher first, and then analyzed by a field expert. The codes found were linked with each other in

emerging themes. The code titles different with each researcher were revised and discussed over, (Silverman, 2005) finally, a strong reliability correlation was found. As the last step, the codes and themes were tabularized with direct quotations from the interviewed participants.

The data were coded rigorously by using the method of content analysis (Fraenkel *et al.*, 2012). Then, codes were linked with each other in emerging themes. During this process, qualitative data analysis software, *NVivo 10* was used. A total of 11 themes and 223 codes emerged after the data analysis.

### **Validity and Reliability of the Qualitative Studies**

In qualitative analyses the prerequisite of the validity and reliability of the researches is to conduct it in an ethical way (Merriam, 2013, p. 199). In order for this study to be conducted ethically, in line with the suggestions of Christensen, Johnson and Turner (2015), a volunteering participation was enabled, and the participants were informed about the research before the interviews were held. The students were assured that their names would not be revealed in any part of the study and they were given nicknames like S1, S2, etc. (Berg & Lune, 2015). Also all the data collection process was given accordingly. In their qualitative study Çetin and Ünsal (2019) detail Lincoln and Guba's (1985) four-step requirements in order for a qualitative study to have validity and reliability: credibility, transferability, dependability and conformability. Çetin and Ünsal (2019) find it beneficial to explain each factor more in order to understand the process of data analysis:

**1. Credibility.** An extensive description of the participants and the followed steps of the study should be given to gain more credibility (Johnson & Christensen, 2004) in order for the reader to evaluate the study in a much simpler way (Creswell, 2016). Therefore, this study details the characteristics of the participants and the data collection and analysis process. Merriam (2013) mentions the importance of the expert views in qualitative studies. However, as this study has an embedded mixed method design, only a 10% of the overlapping was expected.

**2. Transferability.** As qualitative researches are influenced by a host of factors like setting, events, and environmental factors, it would not be wise to generalize the findings of the study conducted (Merriam, 2013; Patton, 2014). That

is why transferability is used in qualitative studies. Transferability is to leave it to the researcher the way and the degree of transferring the findings to their studies. The researchers can decide whether and how they can transfer the other study results to their research. To enable this, all the steps followed during the study are detailed along and interpreted in an effort to be understood by the readers with an easy read.

**3. Dependability.** To ensure the dependability of the data analyses, more than one researcher is suggested to be blind reviewing the data and have agreement over the themes and codes (Creswell, 2016). The themes and codes were compared and contrasted, the disagreement over the codes were discussed by the interraters to come to an agreement in each differing code (Miles & Huberman, 1994; Silverman, 2005).

**4. Confirmability.** In order a study to be objectively confirmed, the data should be digitally accessed. To be more precise, independent steps such as the data entry to the computer, data analysis, reporting the findings and the like are all contributing to the protection and conformability of the data. Creswell (2016) highlights that the data should be open accessed in order for gaining the study a more surveillance-like control.

## **Tests Employed**

Data were analyzed with quantitative and qualitative tests to find answers to the research questions. Cronbach's alpha level for each measurement instrument is given in the "Data collection: Instruments" part in this chapter (pp. 66). To find answers to the research questions multivariate analysis of variance (MANOVA), multivariate analysis of covariance (MANCOVA) and mixed between-within subjects analysis of variance tests were run to detect if there exists a statistically significant difference both at the beginning and end of the study emerging between and within the groups. The quantitative results of this study were supported with the content analysis on the software program *NVivo 10*, utilized to provide more insight for explaining the research findings.

This chapter has laid out the research design for this study. It detailed the data collection process and the instruments utilized, participants' characteristics, and the handicaps faced during the conduct of the study. The next chapter will

display and discuss the findings of this research in both quantitative and qualitative data analyses.

## **Chapter 4**

### **Findings**

The previous chapter presented the research methodology and the steps followed during the data collection process in regard to the full administration of the study. This chapter articulates the findings of the study and explains the results of the research in the scope of research questions formulated at the beginning of the study.

This study investigates the influence of technology-enhanced language learning on a host of variables. The research in order to be more contributory to the literature has been enriched with qualitative data collection. For the readability of the study, first the quantitative analyses are given, then followed by the qualitative results of the research.

#### **Quantitative Findings**

Before answering the research questions, the normality of the quantitative data was checked and it was found out that a statistically tolerable degree of normality is reported after some manipulation of the data (interpolation, removal of the extreme cases and outliers) (Pallant, 2010; p. 83) presented in histograms, Q-Q plots and scatterplots as the output of the analyses (Appendix E). After these steps of normality check, which is an assumption for the conduct of parametric tests (Dörnyei, 2007; p. 208), the data were normalized and ready for a thorough analysis for parametric tests and mean score for the two trials was subjected to multivariate analysis of variance to determine the difference within the groups.

Before moving on to the main research question, I believe it will be helpfully informative to present the levels of each variable with both experimental and control groups at the outset of the study. In this respect, Table 12 documents the pretest levels of the control group on the variables' measured.



Table 12

*Pretest Descriptives of Control and Experimental Groups in Terms of Learner Autonomy, e-Learning Readiness, VLS Use and Vocabulary Size Test*

	Control group			Experimental group		
	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
Autonomy	106	3.18	.67	59	3.12	.68
E-learning readiness	106	5.18	.84	59	5.05	.83
VLS	106	3.39	.60	59	3.32	.41
Vocab test score	106	31.99	10.92	59	30.47	10.80

Table 12 above illustrates the summary statistics for the control and experimental groups' pretest scores on the variables measured: According to Table 12, both learner autonomy level ( $M = 3.18$ ,  $SD = .67$ ) and the level for VLS use ( $M = 3.39$ ,  $SD = .60$ ) were found to be slightly high with the control group whereas, the mean score for e-learning readiness level ( $M = 5.18$ ,  $SD = .84$ ) was found to be higher than both of the previous variables. Similarly, the experimental group students' perceived level of autonomy was moderately high ( $M = 3.12$ ,  $SD = .68$ ) with a similar level for the VLS use ( $M = 3.32$ ,  $SD = .41$ ) while it was found to be higher with the e-learning readiness level ( $M = 5.05$ ,  $SD = .83$ ). As for the vocabulary size test, both groups had very similar scores ( $M = 31.99$ ,  $SD = 10.92$  with the control group and  $M = 30.47$ ,  $SD = 10.80$  with the experimental group).

These findings reveal that students are quite ready for e-learning and they perceive themselves as slightly highly autonomous and also as moderate users of VLS. As for the vocabulary size tests, students of both groups got very close scores.

Like the pretest scores of the students, it was again anticipated that the posttest scores would be helpful to be presented before moving on the analysis of the quantitative study. In this regard, Table 13 gives the posttest scores of the participants on the variables measured:

Table 13

*Posttest Descriptives of Control and Experimental Groups in Terms of Learner Autonomy, e-Learning Readiness, VLS Use and Vocabulary Size Test*

	Control group			Experimental group		
	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
Autonomy	106	3.39	.63	59	3.32	.67
E-learning readiness	106	5.11	.93	59	5.03	1.07
VLS	106	3.48	.55	59	3.43	.60
Vocab test score	106	29.13	11.51	59	32.33	11.59

The posttest scores of the control group did not yield extremely different results from that of the pretest results: According to Table 13 both control and experimental groups were calculated to have a slightly high degree of learner autonomy ( $M = 3.39$ ,  $SD = .63$  and  $M = 3.32$ ,  $SD = .67$  respectively) and the use of VLS ( $M = 3.48$ ,  $SD = .55$  and  $M = 3.39$ ,  $SD = .63$  respectively), where in both variables control group students happened to have a slightly higher score. As for the e-learning readiness level both group participants had a high degree of readiness ( $M = 5.11$ ,  $SD = .93$  with the control group and  $M = 5.03$ ,  $SD = 1.07$  with the experimental group). The vocabulary test results showed that experimental group students scored better ( $M = 32.33$ ,  $SD = 11.59$ ) than the control group students ( $M = 29.13$ ,  $SD = 11.51$ ).

These findings showed that the participants displayed a slightly high level of learner autonomy, use of VLS, and a relatively high level in the e-learning readiness level. As for the vocabulary size test, similarly, scores of both groups were found to be close to each other, with the experimental group scores being slightly higher than the control group's. All in all, amongst all the variables only vocabulary size test scores of the experimental group were found to be higher than that of the control group's.

**RQ1. Prior to the intervention, is there a statistically significant difference between the pretest scores of both control and experimental groups in terms of their:**

**a. levels of learner autonomy, e-learning readiness and the use of VLS?**

The descriptive statistics in Q1 showed that both groups differed in terms of the variables. In order to investigate whether there was any statistically different results; a multivariate analysis of variance was carried out as presented in Table 14 below:

Table 14

*MANOVA Results for the Pretest Scores for Learner Autonomy, e-Learning Readiness Level and the Use of VLS of Control for the Experimental Group*

	<i>Wilk's <math>\Lambda</math></i>	<i>F(1, 163)</i>	<i>P</i>	<i>Partial eta<sup>2</sup></i>
Unv	.993	.360	.782	.007

Before running a MANOVA test, a series of Pearson correlations were performed between all of the dependent variables in order to test the MANOVA assumption that the dependent variables would be correlated with each other at a moderate level (Meyers, Gampst, & Guarino: 2006). After meeting the assumption of a moderate correlation, the Box's M value was checked and found to be 14.125 which was interpreted as insignificant according to Huberty and Petoskey (2000) (i.e.,  $p < .005$ ). Therefore, the covariance matrices between the groups were assumed to be equal for conducting a MANOVA.

A multivariate analysis of variance was conducted to evaluate whether a statistically significant difference existed between all the control and experimental groups' scores at the onset of the study. No violations of the assumptions were detected. Three dependent variables were used: learner autonomy, e-learning readiness and VLS. The independent variable was the study group. The preliminary assumptions for the appropriateness of MANOVA were checked for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity and detected that all the assumptions were met in order to carry out a MANOVA. The test showed that there was not a significant difference between the control and experimental groups in the dependent variables,  $F(1, 163) = .360$ ,  $p = .782$ ; Wilks' Lambda = .993; partial eta squared = .007. When the mean scores were checked it was found that the control group had a slightly higher levels of learner autonomy ( $M = 3.189$ ,  $SD = .678$ ), e-

learning readiness level ( $M = 5.18$ ,  $SD = .847$ ) and the use of VLS ( $M = 3.39$ ,  $SD = .603$ ) than the experimental groups ( $M = 3.12$ ,  $SD = .685$ ;  $M = 5.05$ ,  $SD = .832$ ;  $M = 3.32$ ,  $SD = .415$  respectively).

**b. vocabulary size score?**

In order to investigate whether there was any statistically significant difference, a multivariate analysis of variance was conducted the results of which are presented in Table 15:

Table 15

*MANCOVA Results for the Pretest Vocabulary Scores of Control and Experimental Groups*

	<i>Wilk's <math>\Lambda</math></i>	<i>F(1, 163)</i>	<i>P</i>	<i>Partial eta<sup>2</sup></i>
Unv	.993	2.301	.785	.007

To find out if there was a statistically significant difference between the vocabulary scores of control and experimental groups at the pretest level a multivariate analysis of covariance was performed. The test results yielded no statistically significant results between the groups  $F(1, 163) = 2.301$ ,  $p = .785$ ; Wilks' Lambda = .993; partial eta squared = .007. The mean scores of the groups showed that control group students scored slightly higher ( $M = 31.99$ ,  $SD = 10.92$ ) than the experimental group students ( $M = 30.47$ ,  $SD = 10.80$ ).

**RQ2. Following the intervention, is there a statistically significant difference between the posttest scores of control and experimental groups in terms of their: a. levels of learner autonomy, e-learning readiness and the use of VLS?**

In order to investigate whether there was any statistically significant difference, a multivariate analysis of variance was conducted and the findings of the test are presented in Table 16 below:

Table 16

*MANOVA Results for the Posttest Scores for Learner Autonomy, e-Learning Readiness Level and the Use of VLS of Control and Experimental Groups*

	<i>Wilk's <math>\Lambda</math></i>	<i>F(1, 163)</i>	<i>P</i>	<i>Partial eta2</i>
Unv	.997	.185	.906	.003

A one-way multivariate analysis was carried out to investigate group differences at posttest stage of the study. Again three dependent variables were checked under one single independent variable. Assumption testing indicated no gross violation of assumptions, so MANOVA procedure was pursued. No significant difference was observed  $F(1, 163) = .185, p = .906$ ; Wilks' Lambda = .997; partial eta squared = .003. When the mean scores were checked, control group reported to have a higher degree in learner autonomy ( $M = 3.39, SD = .633$ ), e-learning readiness level ( $M = 5.11, SD = .932$ ) and the use of VLS ( $M = 3.348, SD = .556$ ) than the experimental groups ( $M = 3.32, SD = .677$ ;  $M = 5.03, SD = 1.07$ ;  $M = 3.43, SD = .609$  respectively).

**b. vocabulary size score?**

In order to investigate whether there was any statistically significant result, a multivariate analysis of variance was conducted the results of which are presented in Table 17 below:

Table 17

*MANCOVA Results for the Posttest Vocabulary Scores of Control and Experimental Groups*

	<i>Wilk's <math>\Lambda</math></i>	<i>F(1, 163)</i>	<i>P</i>	<i>Partial eta2</i>
Unv	.964	.355	.208	.036

A one-way multivariate analysis of covariance was carried out to investigate group differences at posttest stage of the study. Assumption testing indicated no gross violation of assumptions, so MANCOVA procedure was pursued. No significant difference was observed  $F(1, 163) = .355, p = .208$ ; Wilks' Lambda =

.964; partial eta squared = .036. When the mean scores were checked, experimental group was found to have a higher degree in vocabulary size ( $M = 32.33$ ,  $SD = 11.59$ ), compared to the control group ( $M = 29.13$ ,  $SD = 11.51$ ).

**RQ3. At the end of the term, does a significant change take place in participants' levels of:**

**a. learner autonomy?**

In order to investigate the impact of the intervention on the experimental group a between-within subjects analysis of variance was conducted. Preliminary assumptions of independence of observations, distribution of normality and homogeneity of variance were checked for the test to be able to run. Both groups were investigated with the dependent variables and the scores were checked. It was found that there was no significant interaction between learner autonomy in the groups, Wilks' Lambda = 1.00,  $F(1, 163) = .035$ ,  $p = .852$ , partial eta squared = .00. There was a substantial main effect for learner autonomy, Wilks' Lambda = .89,  $F(1, 163) = 20.11$ ,  $p < .0005$ , partial eta squared = .11, with both groups showing a slight increase (see Table 18) in both control and experimental group though a statistically insignificant one. The main effect comparing both groups was not significant,  $F(1, 163) = .35$ ,  $p = .85$ , partial eta squared = .000, suggesting no significant difference in the effectiveness of the intervention.

Table 18

*Mixed Between-Within Subjects Analysis of Variance of Learner Autonomy Level*

variable	Experimental group			Control group		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Pretest	59	3.12	.67	106	3.18	.67
autonomy						
Posttest	59	3.32	.67	106	3.39	.63
autonomy						

**b. e-learning readiness?**

To check the levels of e-learning readiness for both control and experimental groups again a mixed between-within subjects analysis of variance was carried out. All the participants were analysed with their pretest and posttest scores for their e-learning readiness level. The results yielded that there was no

statistically significant difference between the e-learning readiness levels of the groups, Wilks' Lambda = .99,  $F(1, 163) = .135$ ,  $p = .713$ , partial eta squared = .001. There was a substantial main effect for e-learning readiness level, Wilks' Lambda = .998,  $F(1, 163) = .366$ ,  $p < .0005$ , partial eta squared = .002, with both groups showing a very slight decrease (see Table 19) in both control and experimental group though a statistically insignificant one. The main effect comparing both groups was not significant,  $F(1, 163) = .587$ ,  $p = .445$ , partial eta squared = .004, suggesting no significant difference in the effectiveness of the intervention.

Table 19

*Mixed Between-Within Subjects Analysis of Variance of e-Learning Readiness Level*

variable	Experimental group			Control group		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Pretest	59	5.05	.83	106	5.18	.84
e-learning readiness						
Posttest	59	5.03	1.07	106	5.11	.93
e-learning readiness						

**c. the use of VLS?**

A mixed between-within groups analysis test was carried out to detect the difference in regard to the use of VLS. Both experimental and control groups were checked and were found to have similar results at the end of the study. The results showed that there was no statistically significant difference between and within the groups over the time in regard to the participants' use of VLS, Wilks' Lambda = .999,  $F(1, 163) = .147$ ,  $p = .702$ , partial eta squared = .001. There was a substantial main effect for the use of VLS, Wilks' Lambda = .963,  $F(1, 163) = .366$ ,  $p < .0005$ , partial eta squared = .037, with both groups showing a very slight increase (see Table 20) in both control and experimental groups though a statistically insignificant one. The main effect comparing both groups was not significant,  $F(1, 163) = .527$ ,  $p = .469$ , partial eta squared = .003, suggesting no significant difference in the effectiveness of the intervention.

Table 20

*Mixed Between-Within Subjects Analysis of Variance of Their Use of VLS Following the Intervention*

variable	Experimental group			Control group		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Pretest VLS	59	3.32	.41	106	3.39	.60
Posttest VLS	59	3.43	.60	106	3.48	.55

#### **d.the vocabulary size score?**

A mixed between-within subjects of variance was carried out to assess the impact of the intervention on the experimental group's vocabulary size scores (with pretest and posttest scores). There was no significant relationship between the intervention and the vocabulary size scores, Wilks Lamda = .963,  $F(2, 163) = 6.208$ , partial eta squared = .037. The main effect comparing the teaching methods was not significant,  $F(1, 163) = .263$ ,  $p = .588$ , partial eta squared = .002, suggesting no difference in the effectiveness of the teaching methods (see Table 21).

Table 21

*Mixed Between-Within Subjects Analysis of Variance of Their Vocabulary Scores*

variable	Experimental group			Control group		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Pretest vocab	59	30.47	10.80	106	31.99	10.92
Posttest vocab	59	32.33	11.60	106	29.13	11.51

### **Qualitative Findings**

Following the quantitative data findings, at the end of the academic term, interviews were held with the students by random sampling method with volunteering participants of the study. The guided semi-structured interview was composed of 11 questions (Appendix F). The interviewees were primarily inquired over their perceptions of technology, technology and its relation with language learning, the advantages and disadvantages of technology in language education,



their vocabulary learning experiences and technology and language learning strategies. They were also asked to evaluate the vocabulary course they took before finalizing the term. Duration of the interviews ranged between 12 to 33 minutes. The interviews were held at Hacettepe University Beytepe Library Study Rooms one by one and at an arranged time for the study group and all of the interviewees were guaranteed for anonymity. The aim of making use of qualitative data was to ensure a more insightful analysis of the quantitative data findings with more reliable results and to explore and explain those results more extensively. The analysis for the qualitative data of this study was run via Dörnyei's (2007) latent content analysis which is based on the categories emerged from the transcribed data. The interviews were transcribed by the researcher and read several times before the independent coders analysed the transcriptions. The categories emerged from the data were coded as well as the themes. After the coding was completed, the check-coding was carried out. The cross-coding agreement percentage was expected to lie at least around 90% of the independent coders. Therefore, in order to conduct a more reliable analysis, Cohen's kappa was run to display the degree of agreement between the coders and a strong agreement was found between the coders of this study  $K = .863$ ,  $p < .0005$  as seen from Table 22 below:

Table 22

*The Results of Cohen's Kappa Statistics*

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Measure of Agreement	Kappa	.863	.093	5.302	.000
N of Valid Cases		37			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

This study makes use of the qualitative data to shed more light on the quantitative data and to provide more insight in answering the third research question which tries to see the changes occurred in the perceptions and scores of the participants. The qualitative findings were used to be more exploratory of the quantitative findings of this study. In order to understand the participants' attitudes

and perceptions toward technology and its impact on learner autonomy in language education, they were asked questions about their personal experiences and in their accounts of the events surrounding emerged 11 recurring themes: (1) autonomy definition, (2) features of autonomy, (3) how they see themselves as learners, (4) technology use at school, (5) technology use in language education, (6) degree of technology use at language teaching, (7) relation of technology and autonomy, (8) suggestions for a change in the courses, (9) suggestions for vocabulary course, (10) reaching objectives of the course and finally (11) changes in vocabulary learning strategies they use. The responses of the interviewees are tabularized with the themes and codes emerged along the entire qualitative dataset of both control and experimental groups.

Qualitative data of this study was aimed to provide deeper insights in answering the third research question which tries to see the changes occurred in the perceptions and scores of the participants.

**Students' awareness of learner autonomy.** The participants were investigated if they were aware of the term learner autonomy in their educational life. The qualitative findings were used to be more exploratory of the quantitative findings. In this regard, the responses of the interviewees are tabularized with the themes and codes emerged and presented below in Table 23.

Table 23

*Learner Autonomy Awareness of the Control Group Interviewees*

<i>Theme</i>	<i>Codes</i>	<i>f</i>
<i>Autonomy definition</i>	independent learning	3
	freedom for the student to take the responsibility during their learning process	2
	using a variety of sources	2
	aware of what has/not been benefitted from while learning	2
	free-willed	1
	optimizing the environment/teacher according to the students	1
	self-regulating	1
	determining the sources	1
	self-directed learning	1
	responsibility of the learner	1
	active learning	1
	creating discussions during learning process	1
	aware of their own learning process	1
	evaluating their own learning	1
	planning the duration of their learning	1
	determining the weak and strong points of their learning	1
	aware of what is being learnt	1
	effective interaction while learning	1
	being helped in the learning process	1
	feedback from the teacher/classmates	1
problem-solving during their own learning process	1	
learning outside school/everywhere	1	
self-directed learning after being motivated by the teacher	1	
learning on one's own with encyclopedias/books/the Internet		

The learner autonomy awareness of the participants was one of the core themes of the dataset. As seen in Table 23 above, almost all of the students were aware of what learner autonomy is and could define it with correctly. Independent learning ( $f = 3$ ) was the most frequently used code amongst the participants of the control group and uttered as in follows:

*I think learner autonomy can be defined as the learner's independent learning, being on his/her own, feeling free of all constraints, able to use all types of sources while learning. (Student 1)*

*Learner autonomy is the situation of the learner who is not dependent on another person, entity or object while controlling his/her own learning process. (Student 6)*

*Learner autonomy is student's learning on his/her own. Teacher is motivating a bit and the student is independently learning with his/her own efforts by means of the sources like the Internet, encyclopedias or books. (Student 9)*

Although a variety of perspectives were expressed, the whole image of learner autonomy was focused on learner's taking charge of his own learning and having control over it. To exemplify, one of the students uttered:

*When I hear learner autonomy, the first thing that comes to my mind is often a situation in which mostly it is the learner who is responsible for his/her own learning. That is, student's being active is what I begin to think when it is learner autonomy. In the traditional sense, it is always the teacher that is at the center however, both the teacher and the learner improve on their own apart from the subject matter given during the classes. What is more, students can develop on what subject matter is presented to them in the classes by asking questions and initiating some discussions over the topics, thus being active learners, and this is, to me, what we call learner autonomy.*

Responses of the experimental group interviewees to the learner autonomy concept happened to be the similar to those of the control group interviewees. The codes emerged around the theme of learner autonomy is given below in Table 24:

Table 24

*Learner Autonomy Awareness of the Experimental Group Interviewees*

<i>Theme</i>	<i>Codes</i>	<i>f</i>
<i>Autonomy definition</i>	self-directed learning	5
	not needing a teacher	2
	independent learning	1
	competent user of technology and able to communicate with both the teacher and the classmates	1
	taking responsibility for their own learning	1
	doing their homework and following the courses	1
	determining what is useful for one's own learning process	1
	making use of teachers/scholars/families for the aim of learning	1
	to be able to choose what is to learn/what course to take/from which instructor to take the course	1
	learning by doing research with various sources	1
	learner's setting his/her own learning objectives	1
	one's skill to progress in line with their objectives in life	1

When participants of the experimental group were asked about what they think of learner autonomy as a concept in education the responses in Table 24 were given. The most recurring code happened to be self-directed learning ( $f = 5$ ) which is followed by not needing a teacher ( $f = 2$ ). Participants gave definition of learner autonomy some of which were as in follows:

*Learner autonomy is a student's setting his/her own studying program and learning on his/her own. (Student 7)*

*To be able to learn on his/her own, both doing homework and at the same time arranging his/her studies is what we can call autonomy in learning. (Student 1)*

Two students mentioned not needing a teacher for learning as in the following:

*A student's taking charge of his/her own learning by not needing a teacher or any kind of directing. (Student 3)*

*Not having the need for a teacher to learn and to be able to successful without any outside help. (Student 2)*

While there emerged to be ideas like not needing a teacher for learning, another viewpoint was that any help from outside can serve us for our learning:

*Autonomy is indeed how we primarily place our learning at the core of our life and benefit from everything and everyone like our teachers, families, scholars we know for serving our aim of learning. (Student 4)*

**Features of an autonomous learner.**

Table 25

*Features of an Autonomous Learner for the Control Group Interviewees*

Theme	Codes	f
<i>Features of autonomous learners</i>	Responsibility	4
	well-planning, well-programming in arranging time and study habits	4
	able to study without needing to be controlled by the teacher	3
	going further from the level the teacher teaches/improve himself	3
	learning for learning, not for passing the exam	3
	feeling free/not shy to ask for clarification from the teacher	2
	searching for various resources in the learning process	2
	to be qualified in the field	2
	learning from his/her mistakes/self-correcting while making a mistake	2
	sensitive, sensible and having goals in the learning process	1
	not just being present but showing full engagement in the class with active participation	1
	Determinacy	1
	Curiosity	1
	Eagerness	1
	dedicating sufficient time for learning to take place	1
	discussing topics with people in his field/native speakers	1
	determining his/her own studying style by knowing his/her strengths and weaknesses well enough	1
	knowing what needs to be learnt	1
	doing regular repetitions of the subjects learnt at school	1
	finding the missing points in what is learnt and tries to complete the learning action	1
Ambition	1	
being a good/hardworking/successful/self-directed learner/ questioning researcher	1	

When the students were asked about the features of an autonomous learner, the responses in Table 25 were given. The most frequently reported code was responsibility ( $f = 4$ ) and well-planning, well-programming in arranging time and study habits ( $f = 4$ ). Participants' opinions on the features of autonomous learners are given as follows:

*They are students who feel responsible for their own learning. They are sensitive, having the feeling of responsibility, know what to do and have aims for their learning. A student who takes a class is not enough to explain what autonomy is, however one who is actively attending the course with some objectives and purposes happen to be an autonomous learner. (Student 3)*

*The most important thing about being autonomous is to be someone who can take responsibility. If a student can take the responsibility for something, it shows that s/he is ready for self-development. (Student 8)*

*A patient student who can plan his/her studying, and learning from his/her mistakes as they are expected to continue learning by themselves and never giving up upon some obstacles but instead striving harder for the next stage by realizing and revising his/her mistakes, learning from the mistake. (Student 4)*

*A student who can determine his/her own learning style and program by knowing himself/herself with strengths and weaknesses. Apart from that it is someone who does not need anyone motivating him/her for improving himself/herself and aware of what s/he needs to learn. (Student 6)*

*A good researcher as s/he learns on his/her own. And also being hardworking and successful, because I believe a person who can learn on his/her own can become successful. It is a questioning person because s/he is learning on his/her own. (Student 9)*

*A student who does not shy away from asking the teacher the points s/he does not understand, and also searches from multiple resources are, for me, autonomous learners. Students who are not autonomous can turn out to be too shy to get the information in this way, so we can detect the autonomous learners in this way. (Student 1)*

The experimental group participants responded as in Table 26 below when asked about the features of an autonomous learner:

Table 26

*Features of an Autonomous Learner for the Experimental Group Interviewees*

Theme	Codes	f
<i>Features of autonomy</i>	being a good researcher	6
	Curiosity	3
	being able to learn on his own	2
	eager to learn	2
	remaining to be objective/without any prejudices during learning	2
	open to different ways in education	2
	making use of the knowledgeable/experts people around him/her for contributing to his/her learning	2
	not needing the teacher for learning but to be helped in the learning process	1
	Questioning	1
	self-directed learner	1
	doing research on a topic that s/he wants to learn	1
	realizing self-initiated progress and pursuing it	1
	realizing the missing points in his learning process	1
	not being self-destructive	1
	indirectly and intrinsically motivate himself/herself	1
	Determinacy	1
	being able to choose what courses and from which instructor to take and when to take it	1
	setting his own learning goals/objectives/gains	1
	planning when and what to study	1
playing active part in the classes	1	

The responses showed the highest frequency with a learner's being a good researcher ( $f = 6$ ) and it was followed by curiosity ( $f = 3$ ).

*An autonomous learner is a good researcher, curious, questioning, does research on the subject s/he wants to improve herself/himself, searches books, especially tries more than a way for learning a subject, and to achieve this goal makes use of all the resources and at the same time*



*benefits from the knowledgeable people around him/her for being directed, and thus contributes his/her own development. (Student 3)*

*Doing research on the topics s/he is interested in with multiple resources like the library, the Internet or books instead of sticking to a single source. (Student 6)*

*Conducting research on his/her own, eager to learn, attending classes more actively and at the same time researching the topics of his/her interest apart from subject matters and building his/her own data on it besides from the course syllabus. (Student 7)*

*He is someone who is sensible, interested in a subject, and he has to be a good researcher. Apart from that, he has to be open minded, as having prejudices about a subject he is searching it will cause problems during learning and can even hinder it. That is why he has to have an objective viewpoint for everything. This is my image for the features of autonomous learners. (Student 8)*

**How they see themselves as learners.** When the participants of the control group were asked about how they see themselves, the responses in Table 27 were given. Qualitative data aims to gain a deeper understanding of the quantitative findings on this issue.

Table 27

*How the Control Group Interviewees See Themselves as Learners*

Theme	Codes	f
<i>How they see themselves as learners</i>	Autonomous	3
	sometimes autonomous sometimes not so in control of the process	2
	partially autonomous	2
	learning from different sources	1
	learning by note taking	1
	active learner	1
	though plans his/her own studying needs the teacher for a complete learning	1
	learning from the peers	1
	loving learning new things and sharing them with others	1
	planning the time to study	1
	learning outside the classroom	1
	questioning what the teacher teaches	1
	loving searching for new things to learn by themselves	1
individualized pace	1	

When the control group participants were asked about how they regard themselves as learners, the most frequently repeated response was their seeing themselves autonomous ( $f = 3$ ), followed by their being not fully autonomous ( $f = 2$ ).

*Personally I see myself as an autonomous learner because I put the limit myself about what sources to use. (Student 1)*

*Mostly I am a learner who learns outside the school. I plan my studying and arrange it. There are a lot of things I learn at school, but I learn more outside the school. (Student 8)*

*I see myself as an autonomous learner because for example I question what the teachers teach us. Sometimes I correct the teacher but sometimes I keep silent when I do not feel the need, but I know that s/he is wrong. Or*

*when I feel that I should correct them I do not keep silent and I correct them. I learn on my own because I know that there is a distinctive satisfaction in the act of learning. (Student 9)*

However, some other students uttered that they were not fully autonomous and expressed themselves as in the following:

*Based on the definition of learner autonomy I gave, I am an active learner. However, sometimes I stay passive and at those times I do not have an active role and stop being an autonomous learner. But I in a short time I shake that state of mine off and again start to have an active role and become an autonomous student. (Student 3)*

*I am a partially autonomous student. I can plan my own learning process however during this entire process I cannot continue it without getting help and direction from the expert, the teacher or the professor. (Student 4)*

*Indeed I am closer to being an autonomous learner however some of my classmates are more autonomous than me. (Student 7)*

*I love doing research on my own however I lose my interest even in someone who does not contribute to my knowledge and if we do not mutually help each other to develop ourselves. I make friends with this aim and keep my ties stronger if it is the case. I love learning and telling what I learn to my close friends or whoever in my immediate surroundings. (Student 5)*

The experimental group participants' responses are given in Table 28 below:

Table 28

*How the Experimental Group Interviewees See Themselves as Learners*

Theme	Codes	f
	doing research on the topic of interest	3
	lacking of goals/purposes/curiosity/eagerness/joy to learn	3
	can learn something /collect data if they have a specific interest in the topic	3
	autonomous	2
	needs teacher in the process of learning as a facilitator/ supporter/ correction/ feedback	2
	having responsibility/control	2
	partially autonomous	2
<i>How they see themselves as learners</i>	a normal student who tries to be autonomous	1
	doing homework	1
	setting the goals for the new learning experience to occur	1
	Questioning	1
	Curious	1
	not autonomous	1
	not motivated	1
	lack of self-knowledge on the strengths and weaknesses	1
	not having anyone for motivating them	1
	learns through repetitions	1
	learns by listening	1
	used to be autonomous	1

The experimental group participants of the study reported that some students do research of their interest ( $f = 3$ ), some lack the goals, purposes, curiosity, eagerness and the joy to learn ( $f = 3$ ) and while some others stated that they could learn something if they had a specific interest in the topic they were learning ( $f = 3$ ). Of all the 8 participants of the experimental group only two students reported that they saw themselves as autonomous learners ( $f = 2$ ).

*I see myself as a normal student who tries to be autonomous. However, as we have just mentioned the concept of responsibility of a student, like doing his homeworks and regularly studying, I stop being autonomous because I do not do homework as I think I most of the homework we are assigned is*

*useless. But I am an autonomous learner when we think of studying autonomously. (Student 1)*

*I am 80% autonomous, and the remaining 20% is the part that I need the help of a teacher no matter how autonomous I grow, because when I learn something there always happen to be some question marks in my mind to be answered, or some points that I cannot fully comprehend, and at this point I need the teacher there, also for correcting my mistakes and providing me with feedback. (Student 2)*

*As a learner, I am a student who is somewhere in between needing outside discipline and who is autonomous. To be honest, I am not very good at learning on my own, but if I am determined to improve myself in a particular subject and have set a goal for it, I do research on that subject, make use of the sources around me and continue being questioning and curious. I try to find new ways to pursue my learning. For example I use the Internet quite often. (Student 3)*

*I love doing research especially if it is a topic I am interested in. I try to gather information from the necessary places about that matter, definitely consult and talk to the people around me whom I find knowledgeable enough. Apart from that I do research on the Internet, surf for videos on the topic. If I want to learn something, it is most likely that I go for it and achieve my goal. In that sense I regard myself as an autonomous learner. (Student 8)*

While some students expressed their positive aspects about learning, some others were not so optimistic about their situation and had remarks over it as in the following:

*Sadly, losing all the motivation I had years ago, I am not at the point where I started. Unfortunately, I do not have ambition to study and do not fight against obstacles I face. Maybe it is due to the lack of familial motivation or just related to the teacher. Or simply it is me because I believe that we neglect ourselves and know little about ourselves. It goes back to the primary school years when all the strengths and weaknesses should be explored and told to the student or the student should be helped to discover*

himself. To give an example, we go to school and learn English without being told why we learn English. In this sense, the objectives and aims should be told to the students so that they also can set their own personal goals related to that particular course. In this way students can find motivation within themselves. (Student 4)

I used to be rather curious during high school years, and do research on whatever I had some interest. However now I try to keep up with the course subjects and happened to lose the curiosity to search for the things apart from the school subjects, especially on the linguistic interest. Of course sometimes I watch videos on languages but not as eagerly and actively as I used to. (Student 7)

**Students' perceptions over the use of technology at school.** When the participants were asked how they find the use of technology at school, they responded as tabularized in Table 29 below:

Table 29

*Views of the Control Group Interviewees about the Use of Technology at School*

Theme	Codes	f
<i>Technology at school</i>	contributing immensely to listening and speaking skills	6
	playing a great part in language learning	4
	enabling a change in the mindset of the students change over time by	4
	being exposed to new cultures/music styles/lifestyles/tv series/foreign websites transform	
	most helpful due to physical accessibility for the users	2
	is highly important in language education compared to the other disciplines	2
	needing smart boards/digital dictionaries	2
	tech compensates for the real life experience	1
	extremely helpful for the practice, grammar, communication	1
	gradual increase in technological uses	1
	in support of technology at school	1
enables dynamic use like the language itself	1	
time-saving	1	

Students' responses showed that almost all of them agreed over the positive use of technology at school on the listening and speaking skills ( $f = 6$ ). It

was followed by the responses that it plays a great part in language learning ( $f=4$ ) and enables students to change their mindset over time by exposure to new cultures and music ( $f = 4$ ). Some of the remarks of the interviewees are excerpted below as in follows:

*Frankly, as a language student I believe it is highly important for the language students compared to the other students majoring at different fields, because language means a new culture, a totally different phenomenon, it means the reflection of something that does not exist in our culture. Under these conditions we cannot go abroad right now, so we cannot improve our communicative skills without technology like the use of music or videos no matter how hard we try. We can improve our skills up to a certain level but to go further we definitely need technology. Technology greatly helps us in many aspects of learning a language such as learning new words, grammar, language courses, skills to communicate with the native speakers and more. (Student 3)*

*As a language student. I believe technology is highly influential for learning, because we have a lot of books as sources at hand. However, on the Internet these sources and many more are available which contributes more to our lives than any other means, and as we are learning a foreign language mostly the sources we need are from different countries. To reach and obtain those sources we need technology like mobile phone, etc. (Student 6)*

Only one student expressed that he was not content with the use of technology during his high school years stating:

*Unfortunately, I was not at the department of language back in high school. However, technology, smart boards were used during our classes and we were benefitting from them. Apart from that unfortunately, we could not have much chance to utilize technology at school. (Student 1)*

Just like the control group interviewees, experimental group participants also had positive attitudes towards the use of technology. Table 30 below presents experimental group responses to the use of technology:

Table 30

*Views of the Experimental Group Interviewees about the Use of Technology at School*

Theme	Codes	f
<i>Technology at school</i>	extremely important/beneficial and being used quite effectively in education	6
	provides with a variety of sources of information/online courses/English movies/English songs/social media/new words/creating new words	5
	COCA Corpus	3
	learning many words/ meanings/ collocations/ synonyms/ antonyms through the use of tech/COCA Corpus	3
	helps a lot for listening skills with native speaker talks	3
	their young age requires more tech use	2
	helps to develop a more advanced way to learn	2
	technology is indispensable for the language learners	2
	smart boards/colorful images/ visuals/listening materials help the students become more competent in the language	2
	using more since the beginning of the term	1
	helps to become active learners	1
	helps to improve world knowledge	1
	tech is necessary but not everything can be fulfilled by means of technology	1
	students should have the awareness and the feeling of responsibility while they are on the computers/making use of tech otherwise it may cause a waste of time	1

More than half of the students widely agreed that technology is highly important/beneficial and is effectively being used in education ( $f = 6$ ) and that technology provides one with a variety of sources, information, online courses and many more ( $f = 5$ ).

*Technology is like our hands, we are so in need of it. For example, COCA Corpus or other online dictionaries are very necessary for us as language learners because we need a great deal of linguistic information such as meanings of words, literal or metaphorical meanings, the collocational background and usages. All these require us to use technology more. (Student 3)*



*I think it is used at an ideal level. Especially the visual aspect of uses like images, photos, videos or being able to listen to the native speakers or even being able to search for the subjects we are interested in and finding related images or videos on it is highly significant, because I believe technology is needed to experience and witness other cultures and people. (Student 7)*

*We are able to reach all the sources via the Internet. We can have online courses, watch movies or songs on/in English just thanks to the Internet. If we take it away from our lives, I believe not so many people can speak it anymore. Also social media immensely contributes to this improvement in English like learning new words, or even creating new ones. To me, thanks to all these reasons and more technology greatly contributes to language learning. (Student 8)*

*My perception of autonomy was positive at the beginning of the term and now it has grown more positive. Both the smart boards, the slides we used and especially COCA Corpus have been so helpful for us to improve our linguistic skills. It will be wrong to see the use of technology limited to language education as it is important for all disciplines. What we need to be aware of is how well and appropriately we can make use of it for our teaching and learning goals. (Student 1)*

**Use of technology in language education.** When the control group interviewees were asked how they find the use of technology in language education, each of them gave examples of uses of technology in language education as listed in Table 31 below:

Table 31

*The Use of Technology in Language Education for the Control Group Interviewees*

Theme	Codes	f
<i>Technology use in language education</i>	provides many videos/movies/foreign music/ songs/dictionaries and more exposed to the language	4
	was really effectively used in my educational process	4
	could be more usefully benefitted	3
	cost-free/easy access to the sources	2
	mostly relying on the student efforts to progress and make use of technology	2
	more use of videos and listening materials at university	2
	tech helps to initiate the linguistic studies and fuels an interest in language learning	2
	developing very effectively in finding new ways to contribute to the language education by the help of teachers/ administrators/ educationists/ institutions	1
	books and print sources, blackboards are replaced with CDs, soft sources, the internet, smart boards, games, music, movies	1
	not efficiently used at high school	1
self-teaching by mobile phone, tablet and pc by watching TV series, listening to music	1	

Students highlighted the uses of technology in language education by giving examples as reported below:

*I strongly believe that the use of technology is getting more improved as time passes. Both the teachers and the technology experts collaboratively carry out projects and develop some applications for the language learners. Especially listening, speaking and even writing applications have gained momentum amongst peoples around the globe as well as popularity in language learners. This is a good development. (Student 1)*

*In my educational life technology has been really effectively used however, as some part of responsibility lies in the student, it cannot be beneficial enough if the student does not put effort as expected. Personally I believe when it is language learning, students' part gains more significance. (Student 2)*

Half of the interviewees noted that they were not content with the uses of technology in their educational life:

*In my opinion, we are not benefitting from technology as much as we could in our education. I think we could make more use of it and it could more properly serve our educational goals. Right now we do not effectively benefit from technological innovations for the purposes of, for example, listening, using online dictionaries, watching movies or for some other educational aim. At high school, for example, we did not satisfactorily utilize technology. Although we had many sorts of devices and utilities, we always were pushed to prepare for exams with multiple choice questions. It was like this up until we got to the university. (Student 4)*

*I really find the use of technology in our education unsatisfactory especially at high school. It is not saying that we did not have the innovations of technology, but that we did not use them appropriately for our educational purposes. We could have used the Internet for checking the pronunciation of words, or searching for some topics on the web, but these were not done. Maybe it would have been effective if we had used it by hearing the words or watching videos on them. I think it is relatively better right now; maybe I am with this opinion because I am at university right now. When we have a word unknown to us at class, our instructors or professors make use of the Internet for teaching us it both phonetically and semantically. Still it is not enough but at least better than it used to be. (Student 6)*

*We were at military high school and used to watch movies at school, and thus we developed our listening skills then. However, this is not the case with the rest of the majority of high schools in Turkey. Right now I am doing all my research and learning on my mobile phone or laptop. I watch TV series, listen to music clips and thus improved my language skills. (Student 8)*

*At primary school there was almost no use of technology, and then it started at high school. And the only time we used technology is university now. Professors make use of technology more effectively. (Student 9)*

*If there is no technology embedded in education, I believe, education remains to be incomplete. (Student 7)*

The experimental group participants gave the responses in Table 32 when asked about the use of technology in their language learning process:

Table 32

*The Use of Technology in Language Education for the Experimental Group*

*Interviewees*

<i>Theme</i>	<i>Codes</i>	<i>f</i>
<i>Technology use in language education</i>	use of technology for speaking/listening/practicing the language/ learning a new word by use of videos/ online dictionaries/ applications/ online materials/websites/ specific language activities/watching movies/excerpts from TV series/ sitcoms	5
	student opinions on their strengths and weaknesses for a more appropriate teaching style via questionnaires/games	5
	more tech-focused teaching at university	3
	COCA corpus was helpful	2
	some schools do better on technology some do not	1
	smart boards/projection device could be more beneficial for the student than expected	1

The most frequent response of the interviewees was using technology for speaking, listening, practicing language, learning a new word by use of videos, online videos and other opportunities technology provides ( $f = 5$ ). Some responses of the students are as follows:

*At high school we used to have smart boards and watched parts of movies, sitcoms of 20 minutes at most it as we had a limited time. Thus our listening and speaking skills improved. (Student 2)*

*Technology in language education is the most widely used means as while practicing the language, listening or learning a new word we use online dictionaries, also some specific applications and websites have exclusively language teaching purposes are available which are full of teaching activities. For instance, at present our professors prefer assigning us online homework which eliminates the possibility of missing the deadline or any*

*other problems for submissions. They are also able to check the homework performances with more flexibility of comparing one with the others. (Student 3)*

*I feel happy learning COCA Corpus. I believe my friends feel the same way. (Student 6)*

*In language education there can be online lessons, videos to support the traditional teaching methods. For instance, for young learners entertaining activities on the Internet can be used by using cartoons, songs, etc. Apart from that, if we want to learn a language I believe that the Internet has all the sources for us to learn it. For instance Korean or Japanese languages even exist on the web as well as their multiple sources, test, quizzes, graded readings and many more opportunities. I think we can greatly benefit from all of these. (Student 8)*

**Degree of technology use in language teaching.** When the respondents of the control group were asked about their opinions about how they find the degree of technology use in their educational life, they gave the answers as listed below in Table 33:

Table 33

*The Degree of Technology Use for the Control Group Interviewees*

Theme	Codes	f
Degree of technology use in language teaching	content with the degree of tech use at university now	2
	imbalance between the courses in the use of technology	2
	sometimes the teachers are not so competent in technology use	1
	sometimes the class is too crowded to make use of technology	1
	there is a gradual increase in the degree of the technology being used	1
	not so useful when not used properly	1
	can be highly purposeful if some videos as examples just after some abstract and difficult subject matter are shown	1
	right degree of technology use but not a proper one	1

The participants' responses about the degree of technology varied as in the following:

*As time passes I see that there is an increase in the use of technology in our courses which I find highly useful for us. (Student 3)*

*We use technology but not satisfactorily. (Student 4)*

*Right now we do not make use of technology very much, mostly we are orally lectured. We have ten courses, and of all we have only one course that sometimes uses technology during the class time like playing some TED-Talks speeches. I believe class size is also important, for instance Lexical Competence course was too large to be able to use technology. (Student 5)*

*I strongly think that only an ideal degree of technology can be helpful for our education. Some courses overly use it while some others poorly benefit from it, there must be a proper and appropriate use of technology in our courses. For instance, after the class time slide shares are given to the students which I find so ineffective. I personally believe that tech-use should not take more than actual lecturing of our professors in order for them to be beneficial. (Student 6)*

*I am happy with the degree of technology we have in our lessons right now. (Student 7)*

*Indeed I am content with the current situation with technology at our courses. I absolutely find it useful and applicable. (Student 8)*

*I am not satisfied with the degree of technology we make use of at our department for the time being. I believe tech-use should be increased. Apart from the Lexical Competence course, which had a large class size like more than 100 students, other courses could enable us to use more technology for this term. (Student 9)*

Similar to the control group interviewees, experimental group participants also noted differing answers as tabularized in Table 34 below:

Table 34

*The Degree of Technology Use for the Experimental Group Interviewees*

Theme	Codes	f
<i>Degree of technology use at language teaching</i>	imbalance in the tech uses of the instructors	4
	not so purposefully used	3
	ideal and sufficient degree of tech use	3
	not ideal degree of tech use	3
	old tech equipment/devices/no wifi except for the library on the campus	3
	should be used to motivate the students	3

Half of the interviewees of the experimental group reported that there was an imbalance between the degree of use of technology amongst the instructors ( $f = 4$ ). Some of the responses are as follows:

*That degree changes from instructor to instructor. It is either some of our instructors overly use it or the others poorly use it. It is either the slide shower starts the moment we begin our class or the computer is off when the class begins and remains to be off at the end of the course. There really needs to be a balance between the two types to reach the ideal degree of technology use. (Student 1)*

*I think we should benefit more from technology, the current degree is a little below the ideal level of use. (Student 2)*

*Apart from using COCA Corpus I do not have a course that makes use of technology effectively. (Student 3)*

*I think it is used at an ideal level right now. (Student 5)*

*The degree of technology use we have in our classes is ok for me. (Student 6)*

*I think it is at a moderate level but could be used more effectively and motivate the students for more scientific research. More than mere homework, more fruitful projects could be used to get the students more active. (Student 7)*

*I think it is at an ideal degree. For instance, in Phonetics course our instructor made use of videos on multiple websites and YouTube so that we*

*could grasp the pronunciation and gave us many examples. They improved our listening and pronunciation, so I found it very helpful for us. Instead of mere slide presentations such uses of technology was quite beneficial. (Student 8)*

**The relation of technology and learner autonomy.** Students were asked whether they thought there was a relation between technology and learner autonomy and the responses they gave are presented in Table 35 below:

Table 35

*The Relation of Technology Use and Learner Autonomy for the Control Group Interviewees*

Theme	Codes	f
<i>Relation of technology and autonomy</i>	highly/absolutely/directly/strongly related/connected	7
	positive influence on the learner autonomy	2
	tech becomes our source of info, and we achieve with the help of it	1
	an ideal level of tech use promotes autonomy	1

The entire control group interviewees noted that they found a relation between the use of technology and learner autonomy ( $f = 7$ ). Some of their responses are as follows:

*Both of them are connected to each other. (Student 1)*

*Absolutely there is a relation between the two. (Student 2)*

*I see a relation between them: for example, a student gets education at school and also studies at home too. By downloading language learning applications, he can go further from what the teacher gives at school and thus begins to be autonomous. (Student 3)*

*I think as we are yet not experts at autonomous learning, we may need someone to help us when we need. A person who claims to be autonomous but not using technology at all eventually will turn out to be incomplete. (Student 4)*

*I think it is exactly the strongest tie's spot because while autonomously learning for ourselves we make use of technology. (Student 5)*



*I think there is positive influence of technology on the learner autonomy. (Student 6)*

*Indeed there is a connection between them. The concept of learner autonomy is what we experience via technology. (Student 8)*

*Although technology and autonomy sound to be two different terms they unite at a point: We are in 2019 and we go beyond the libraries or just books even while doing a simple research. (Student 9)*

The experimental group was also asked about the relation of technology and learner autonomy and similarly all of the interviewees agreed that they both are connected, as given in Table 36 below:

Table 36

*The Relation of Technology and Learner Autonomy for the Experimental Group Interviewees*

Theme	Codes	f
<i>Relation of technology and autonomy</i>	certainly there is a relation/connection between them	4
	some conducts with tech can be arranged to promote autonomy	2
	There is not a connection between them, both exist separately.	1
	completely related to each other	1

Table 36 shows that all the participants were positive that there was a connection between the two terms. Some interviewees' responses were as follows:

*Of course there is a relation between them. For instance, 80-90% of English I have learnt was from the Internet, and the remaining part was from school. I watch TV series in English, play games which help me improve my English, which really shows that they are both connected, as for instance, when you do not understand a topic at school you can search on it on the web and learn on your own. (Student 1)*

*I believe definitely there is a connection between them. (Student 2)*

*There can be a connection like this: as autonomous learning is learning on your own and gathering data, technology is the means for gathering all the data we are searching for. So both are related to each other. (Student 3)*

*I think there is a connection between them. A person who uses technology gets to be more independent and thus does research on his own and begins learning by himself thanks to the Internet. (Student 6)*

*With technology it is easier to learn and stand on his own. So there is a clear connection between the two. (Student 8)*

**Suggestions for the courses.** When students of the control group were asked about their suggestions for the courses responses in Table 37 were given:

Table 37

*Suggestions of the Control Group Interviewees for the Courses*

Theme	Codes	f
<i>Suggestions for the courses</i>	smaller class size	3
	a good student-teacher communication/interaction	2
	no need for a change in the courses	2
	more use of tech is needed	2
	a teaching process which gets students to be more active	1
	more focus on pronunciation	1
	more well-equipped computer labs	1
	Definitely there is a need for a change in the courses but do not know how.	1

Class size was highly frequent amongst all the responses ( $f = 3$ ) of the participants. Some of the responses were as follows:

*I would love to split the class in two and make two sections, thus it would be easier to manage the class and teach better. (Student 1)*

*I would love to use more videos and images during courses to support what is being taught. (Student 3)*

*Instead of taking the student to the board, we all have mobile phones with the Internet in our hands; I would make use of those phones while sitting in our chairs and carry out activities by using that chance. (Student 4)*

*Of course I would like to make a change in the courses. For instance, in Oral Skills course, we would be not more than twenty as the class size and I would carry out video chats in the classroom with the native speakers. So they would see us and I would see them which would be a nice experience and chance to improve our speaking skills. (Student 9)*

One student stated:

*I would certainly make a change in the courses but do not know how as some courses are overly depended on technology while others remain to be weaker in uses of technology. (Student 6)*

The suggestions of the experimental group interviewees are given in Table 38 below:

Table 38

*Suggestions of the Experimental Group Interviewees for the Courses*

Theme	Codes	f
<i>Suggestions for a change in the courses</i>	more activities, online speaking sessions, more speaking in the courses, house turned into a classroom	5
	a more energetic teaching	4
	more and a careful use of tech	2
	use of different sources	1
	initiating new discussions for new horizons	1
	more attention on the teacher rather than the tech	1
	would not make any changes	1

Responses for suggesting a change for the courses revolved around carrying out more activities, doing online speaking sessions, and getting the students speak more during the class, and also turning the house into a classroom ( $f = 5$ ) while only one student noted that he would not make any changes in the courses ( $f = 1$ ). Some interviewees stated their suggestions as follows:

*My suggestions would be like this: Especially for speaking class, I would prepare an online video chat with an English-speaking university and arrange a class time for both classes to be able to speak on video or I would turn houses of my students into classrooms so that they would always be learning. (Student 3)*

*I would use more activities during my classes especially in Lexical Competence course. (Student 7)*

*I would reinforce my students for speaking English even at class breaks in the corridors our outside the building because the more exposed we are to the language the more fluent we get in it. Also for instance, I would ask my students to speak to a voice recorder and then giving it to their teacher so that they would improve in pronunciation. There is not such an activity or homework type in our department so I would love to start such a new conduct. (Student 4)*

*I would make my classes more energetic and dynamic. For instance, when our instructor comes to the class, with his/her tone of voice and body posture we happen to lose our energy and eagerness for the class time. (Student 8)*

**Suggestions for Lexical Competence course.** Students of the control group were asked if they would make any changes in Lexical Competence course and the responses they gave are presented in Table 39:

Table 39

*Suggestions of the Control Group Interviewees for Lexical Competence Course*

Theme	Codes	f
	making use of technology like smart boards, computers by showing phonetic aspects of the new words	9
	active students with different activities to improve language skills/vocabulary size	6
<i>Suggestions for LC course</i>	more use of different examples and/from different sources	4
	a regular testing of vocab knowledge/quizzes	4
	activities for using the new words would make the class more fun and enjoyable	4
	smaller class size	3
	teaching how to distinguish the words according to their pronunciation/terminological meanings and written forms of the words	1

The entire control group respondents mentioned using technology for the pronunciation of the new words they learn ( $f = 9$ ), followed by suggesting enabling

students active learners while improving their language skills and vocabulary size ( $f = 6$ ). Some of the response excerpts are given below:

*More use of smart boards and slides would be useful but as the class size is enormous there is not much the instructor can do about it. I would try to measure the vocabulary development of the student each week with quizzes and would ask the students to differentiate the accents and pronunciation of each word and the usage of it. Thus I would enable them to have a great vocabulary size. (Student 1)*

*We could have listened to more of the pronunciation of the new words we were learning. We were sometimes using dictionaries but it would be more effective for our learning if the whole class would do listening on some phonetic aspects of the new words. YouTube could have been used very efficiently and it would help us improve our listening skills. (Student 5)*

*Such a traditional course would not help us for further studies. For instance, we see the words and then do the word practices given in the book and that is all. This entails almost no interaction which is too mundane. Instead of focusing on the book so much, I would make use of different examples from different sources in that course. (Student 6)*

*We could have used many videos in the classroom which I believe would help more for our vocabulary size. (Student 8)*

Students of the experimental group also suggested some ideas for the improvement of Lexical Competence course as given in Table 40 below:

Table 40

*Suggestions of the Experimental Group Interviewees for Lexical Competence Course*

Theme	Codes	f
<i>Suggestions for LC course</i>	COCA Corpus is beneficial	3
	avoiding mere slide show in the class	1
	daily new word lists	1
	COCA Corpus has been greatly used	1
	More COCA Corpus tests	1
	beneficial for future uses	1
	use of more idioms	1
	Turkish meanings of the words	1
	COCA Corpus keeps all the attention on the new items being learnt	1

Some students of the experimental group noted that they found COCA Corpus beneficial ( $f = 3$ ) and that it has been greatly used ( $f = 1$ ) while keeping all the attention of the students on the new word items ( $f = 1$ ). Some responses were as follows:

*Epecially COCA Corpus has been so useful for us, it gives us many opportunities during learning new words. We are using it for Phonetics too, and it is extremely helpful. Personally I think Lexical Competence course has taught me a lot of things as I have learnt many new things, like different things with the roots of the words and they got me surprised. Idioms, literal and metaphorical meanings of the words they all make one feel different for each word. For instance, house and home seem to mean the same thing however the way you feel for a home is not the same for a house. All these were quite helpful for our learning. (Student 3)*

*I think it was great to use COCA Corpus and worked well with us. (Student 6)*

*The new items we studied on COCA Corpus could have been used in language exercises like in fill in the blanks activity. Such things would be more entertaining and full of joy. Just reading the words is not so fun, and I lose my attention so easily when this lasts for some time. (Student 7)*

*COCA Corpus was something amazing! I think it was the most important contribution of that course for us. Previously we used to be not so aware of the synonyms, antonyms or collocations of a particular word. To learn them we had to go deeply in the roots of the words to scrutinize them; however with COCA Corpus we do all these with so much ease. The frequency of the words, usages and sample statements as examples are all available there, which is so helpful for us. If we did not have the technology it would be a big loss for us as we are language students and need numerous examples of the target language and technology provides us all these.*  
(Student 8)

**Reaching objectives of Lexical Competence course.** When the control group interviewees were asked about whether they reached the objectives of Lexical Competence course, they gave the responses tabularized in Table 41 below:

Table 41

*Responses of the Control Group Interviewees for Reaching Objectives of Lexical Competence Course*

Theme	Codes	f
<i>Reaching objectives of the course</i>	definitely and efficiently/ideally reached the objectives	3
	the course was ok	2
	could have been given in a more advanced level	2
	was effective for some students and not so for others	1
	due to class size it was not a successful course	1

The responses for reaching the objectives of the course varied; some highlighted the perfection in reaching the objectives ( $f = 3$ ) while some others found the course moderate ( $f = 2$ ) and some others thought it could have been taught at a more advanced level ( $f = 2$ ). Some responses of the participants are reported as follows:

*Despite the large class size I think the course was successful in reaching its goals.* (Student 1)

*I always used to be weak in new vocabulary for both the motivation and also the vocabulary size I had. Therefore, I was prejudiced about the new words. When I got to the university, we had midterms, final exams to study and I realized that the more I study, the more words, interesting idioms, phrases, collocations, expressions that bear similarities with Turkish language but with a new use with due to cultural background I learn. And sometimes I found such cultural items quite funny and I begin to have more attention on them and thus start enjoying the process. All these gave me the enthusiasm to learn more of such new words and this situation completely broke my prejudice. I plan to study all my notes I took during the term and study them in summer time and be able to use them in sentences. Right now I feel that I am partially competent in such uses however I would love to get more qualified in this soon and I see that I am almost there. (Student 3)*

*I found the course quite successful. It was a busy term and we enjoyed the classes. We learnt many new words, academic expressions that we had never heard of before which gave us a large vocabulary to have. Therefore, I believe that the course met my expectations in that sense. (Student 4)*

*At the beginning of the term I thought we would learn more of the etymology of many different words, however I found that the words did not have a variety. After all if you have been accepted to Hacettepe University, you are supposed to know many words. I was expecting to learn more words like in the vocabulary size test you gave us, however we did not go much beyond the level and size of the vocabulary we had at the beginning of the term. (Student 5)*

*My expectation was to develop my vocab size, and in the final exam at the end of the term I realized that I reached that aim. For me it was an easy exam which took me just ten minutes but indeed it was not so easy for my other classmates and required a high degree of information. I am sure that if I was given the same exam at the beginning of the term, I would never be able to perform so well then. (Student 8)*



One of the students noted that she could not reach the objectives of the course as stated below:

*Frankly I could not reach the objectives of the course. Both the course and I as a student were much below my expectation. The way the course was taught and the group were below a level which terribly surprised me. Some students were present just because attendance was compulsory, and thus they were far from being all ears for the instructor. I knew that I did not have a vast knowledge of the words, so preferred not pushing myself for putting too much effort in it, that is why I did not do my best at the course and could not meet my own expectations even. (Student 6)*

Experimental group interviewees were also asked about whether they reached the objectives of the course and their responses are given in Table 42 below:

Table 42

*Experimental Group Responses for Reaching the Objectives of Lexical Competence Course*

Theme	Codes	f
	was not a successful course	4
<i>Reaching objectives of the course</i>	was a great success	3
	was moderately successful	2

As seen in Table 42 half of the experimental group participants agreed that the course was not a successful one for them ( $f = 4$ ) while almost the other half thought it was a great success ( $f = 3$ ). Some responses of the participants are given below:

*To learn new words was the aim of the course and I believe we reached that goal. Besides learning the roots of the words, I also began to learn the synonym, antonym and collocations of the words, where to use it and where not to use it. (Student 2)*

*Epecially Lexical Competence course has taught me more than I had expected because I learnt rather new and different things some of which got me surprised. Idioms, some funny expressions and also how literal and*

*metaphorical meanings differ from each other all got me more interested in the course. (Student 3)*

*My expectations were met and I think we reached the objectives of the course at the end of the term. (Student 6)*

Some students mentioned that the course was not satisfactory for them and stated their remarks as follows:

*My expectation from Lexical Competence course was to learn new words with their roots, but what I learnt was how to open COCA Corpus and how to use it. I personally do not use COCA Corpus much. I like learning during the courses and do not need to do homework at home. I found COCA Corpus overly used; otherwise at the beginning of the term I really liked the new words we studied in class where we learnt how to analyze their roots. (Student 1)*

*I could not find Lexical Competence course successful and it did not meet my expectations, thus I happened to lose my interest and enthusiasm for the course. Although I could not like the subjects, I must still confess that I learnt some things from that course, like guessing the meanings and it is 90% that I make correct guesses about them. I believe the course will be beneficial in my career in the future. (Student 5)*

*I was expecting to guess the meaning of a word with the roots of it, the suffixes, affixes, however I cannot say that I am able to do it right now. I know that it is a loss for me, but it is what I feel about the course now. (Student 8)*

**Use of vocabulary learning strategies.** When students of the control group were asked about their use of vocabulary learning strategies, the responses in Table 43 were given:

Table 43

*Use of Vocabulary Learning Strategies of the Control Group*

Theme	Codes	f
<i>Vocabulary learning strategies they use</i>	not changed	4
	changed and improved	3
	started to have one	1
	not changed but improved	1

Almost half of the control group interviewees stated that their use of vocabulary strategies did not change ( $f = 4$ ) while some of the rest noted that though there was not change in their strategy use there happened to be some improvement with it ( $f = 3$ ). Some expressed themselves as follows:

*To be honest, previously I used to not have a strategy for learning a new word. I used to look it up while reading articles, books and texts. I did not keep a notebook for new words for example. However, after this course I have realized that if there is a new word in a reading text, I check its pronunciation and sometimes take notes of it if I feel the need. I feel that some things have changed with me in that sense and evolved to be better. (Student 1)*

*My strategy use did not change but rather it has improved. I have started using it more because in order to manage lots of new words all at once, I need to something fast and timesaving. (Student 2)*

*I used to keep notebooks for new words and highlight the points I could not understand. However, mostly I learnt through mobile phone applications, technological advances. At present I study by pen and paper for exams and move away from technological advances. (Student 3)*

*Before I took this course, I was clueless about the strategies for learning new words apart from keeping a notebook. But our instructor taught us some strategies like concept maps, coding, learning with connotations. I have improved my learning behaviors with that course and I am content with it. (Student 4)*

*I used to keep a notebook for new words and tried to memorize them. With this course, I have started seeing and repeating the words more than once which helps me learn it faster. Instead of writing the word, I first look it up, check the pronunciation and the usages of it, and by doing so I fully learn the word and internalize it. (Student 5)*

*I still use the same strategy. I am not sure whether our instructor taught us one but I do not remember such a class time. We were just given new words with their meanings and did the exercises in the class. Apart from that we were not given any help for vocabulary learning strategies. (Student 6)*

*I do not believe that vocabulary learning strategy I use would change any more. This has been established for a long time now. (Student 7)*

*Not a big change took place. I studied vocabulary exams in line with the teaching of our instructor. When I learn a new word, I always use it while talking to my classmates and mostly with my home mates. I use it so much that they even begin learning it and strangely start using it. This is how I learn new items in vocabulary and not much has changed in this with our course. (Student 8)*

A student stated his negative feelings about the course as in the following:

*Lexical Competence course did not contribute to my development with anything. I use websites for new words and their pronunciations, I still do the same. (Student 9)*

When the experimental group students were asked about their strategy use, responses in Table 44 were given:

Table 44

*Use of Vocabulary Learning Strategies of the Experimental Group*

Theme	Codes	f
<i>Change in vocabulary</i>	no change	4
<i>learning strategies they</i>	helping to guess the meaning of a new word	2
<i>use</i>	not changed but the awareness increased	2

Half of the interviewees noted no change in their vocabulary learning strategy ( $f = 4$ ) while the others expressed some increased awareness in the course of time ( $f = 2$ ). Some remarks on the participants' vocabulary learning strategy use are given below:

*Nothing changed with my language learning strategy. (Student 1)*

*I used to write down the new words on cards and on the other side I would write the meaning. Apart from that I used to write new words for about 5-10 times to memorize. I still use the same way, but write difficult words for around at least 9-10 times. Presently I check the pronunciation of the words, how and where to use it and with which words. I also analyze the sample sentence and try to internalize the word. (Student 2)*

*Lexical Competence course has helped me to realize new methods like guessing the meaning from the context. Now I am aware of different ways of guessing the meaning of a new word and benefit from them while reading texts without needing a dictionary. I think it triggers a better learning as we try hard to grasp the meaning from the nearby words and the entire text itself. (Student 3)*

*The week before we studied the subject of collocations. It is more helpful now that it is more organized under a particular topic. For instance, we learnt how to guess the meaning. (Student 4)*

*There was no change in my vocabulary learning but my awareness has increased. First I look the word up, mostly on the Internet or hard copy dictionaries. After that I definitely check the context as the meanings can dramatically differ according to the context. So I believe it is highly significant to check the context. (Student 6)*

*I use cards to write new words and their meanings on. I still use the same method and believe it is useful to memorize new words. (Student 7)*

*First I try to get the meaning from the context and then look around the nearby words. I also have to write down that word and loudly repeat it several times in order to internalize it. Apart from that when I encounter it in a song or a movie I realize it. (Student 8)*

## **Chapter 5**

### **Discussion**

This chapter articulates the main results of the study with regard to the research questions through scrutinizing them under the related research of the field. The findings of the study are discussed in this chapter according to the order of the research questions reported in the previous chapter. This research aimed to check the impact of a WBC teaching on variables of learner autonomy, the level of e-learning readiness, the use of VLS and vocabulary size development, each of which is extensively discussed as the chapter proceeds. The students in the current study were found to be above the moderate level in all the dependent variables measured both at the beginning and at the end of the study. The control group students showed a slight decrease in their e-learning level and vocabulary size development whereas in their learner autonomy level and the use of VLS, they showed a higher level at the end of the study compared to their initial level. As for the experimental group, there was a very slight decrease in the e-learning readiness level but the remaining variables, which are learner autonomy, the use of VLS and vocabulary size test were found to have an increase, though a slight one, at the end of the study. In the following sections, the findings of the study are discussed with reference to previous research in the field.

#### **Learner Autonomy in the Control and Experimental Groups**

This study aimed to explore the influence of a WBC teaching on the level of learner autonomy, e-learning readiness level, the use of VLS and the vocabulary size development after a term period, and the findings of this study were not so much in line with the related literature (Üstünlüoğlu, 2009; Chan, 2015) as the results showed that students had a considerably high level of autonomy, were highly ready for e-learning, moderate users of VLS and their vocabulary size decreased as the difficulty level of the test increased.

The quantitative findings provide convincing evidence indicating that control and experimental group students were highly autonomous in their educational life. Of the two groups of this study, control group students reported themselves to be highly autonomous and at the end of the study there was a slight increase in their autonomy level. They were able to define what autonomy is, and showed an

awareness of autonomy by giving details about it. Some students were able to state that autonomy means independent learning and some others said that it is freedom of the students to take responsibility during their learning process. Some others also reported that using a variety of sources as well as being aware of what is beneficial and what is not in the learning process is what we call autonomy.

Students of the experimental group also perceived themselves highly autonomous though not as much as the control group at the beginning of the study and at the end of the study there was an increase in their autonomy perception level, though not as high as the control group's posttest records. Most of the experimental group interviewees defined autonomy as self-directed learning while the rest mentioned not needing a teacher, independent learning, competently using of technology and to be able to communicate with the classmates and the instructor. As we see, definition of autonomy differs in the eyes of the students and while some focused on the learner's capacity to direct his/her learning, some others highlighted the ability of using technology and communicating.

The findings for the level of learner autonomy were also in line with the related literature in that foreign language students tend to have a certain level of autonomy in that they have to get the control after some time as it is a long term process. That is, language learning is a long-term process, somehow pushing the learner to have a certain degree of autonomy while learning the language as also observed in previous studies (Yağcıoğlu, 2015; Chik & Ho, 2017; Cole & Vanderplank, 2016; Cotterall, 1995; Gao, 2010; Little, 2009; Najeeb, 2013; Nunan, 2003; Smith, 2008; Smith *et al*, 2018).

The responses of both groups gain more depth by the features of autonomous learners noted by the interviewees. In their definitions of autonomy, they state all aspects and characteristics of autonomy, ranging from independent learning to free-willed engagement, from self-directed learning to self-regulation. As well as the immediate findings of this study, much literature is also in line with the fact that self-directed learning positively influences the language learning process (Ames, 1992; Dörnyei 2001) and self-regulated learning has direct impacts on it (Pintrich, 2000; Zimmerman, 2002) triggering active learning (Locke & Latham, 1990) and promoting autonomy (Wenden, 1991). The related literature also displays that improved learning performance is influenced by their degree of

autonomy (Ames, 1992) and academic achievement is closely related to the instructor feedback along with the goal-setting (Schunk & Swartz, 1993). Several studies have revealed that self-directed learning, which is complementary and integrated with goal-setting, is necessary for academic success (Ames, 1992). Students deprived of feedback and goal-setting can lose their motivation and perform weakly in the course. As Borg (2011) put forward learner, teacher, administration/institution/policy are all involved in the development of learner autonomy, all these bodies play a significant role in the attainment of learner autonomy. And the hindering factors in the implementation of autonomy can be the lack of motivation, the time management issues and other learner- and task-related issues Chan (2015). In the current study, lack of motivation can be taken as a constraint for the development of the student in gaining high scores for all measures.

In their accounts, while the control group interviewees focused more on the concept of responsibility, experimental group students mostly highlighted being a good researcher as the feature of an autonomous learner. Other responses to the question of features of autonomous learners also showed some overlap and happened to be integrative and completing each other. The fact that participants of the study had an awareness of autonomy and knew the characteristics of an autonomous learner can be explained by their being at a certain level in their educational life, that is, being accepted to universities each of which requires a high degree of both language competence, academic achievement which can be seen as an outcome of self-awareness about their own learning process and themselves. Supportingly, when the respondents were asked whether they regarded themselves as autonomous or not, almost half of the control group interviewees reported that they saw themselves as autonomous. As for the experimental group respondents, though they did not openly and directly state their being autonomous, almost half of the participants said that they regarded themselves as being able to do research on the topic of their interest which supports their responses for the definition of learner autonomy. Although the accounts of students that they found themselves autonomous are partially in line with that of Üstünlüoğlu's (2009), who finds that neither the students nor their teachers perceived the students autonomous, it can be easily inferred that



experimental group students perceived themselves as autonomous, which can be regarded parallel with the quantitative findings of this study. Both groups showed similar results within both types of dataset in expressing the construct of learner autonomy and their perception of themselves as learners.

Compared to the control group respondents, fewer experimental group students perceived themselves as autonomous. Literature bears a great body of research on the construct of autonomy, according to which (Benson, 1997; Oxford, 2003), there are four aspects which embody learner autonomy as a construct in education, as also mentioned by Nguyen (2014), which include: technical, psychological, political and the sociocultural aspects. The technical aspect is related to the physical state of the person, the psychological aspect is based on the characteristics of learners, the sociocultural aspect takes mediated learning into the scope, and finally the political-critical aspect highlights ideologies, access, and power relations. The responses of the participants can be analyzed under these four dimensions: Firstly, the definitions of learner autonomy given by the interviewees were basically focused on the technical and psychological aspect of the construct. That is, they made reference to the school, classroom environment of the students while defining the term, like “anyone who does not feel confined into the classroom”. As regards with the psychological aspect of autonomy, most students of both groups focused on the personal characteristics of the student in their definitions of autonomy. To exemplify, to have responsibility, curiosity, eagerness, being good researchers, not feeling shy about asking for clarification or questions in the classroom, and more were mentioned as some aspects of autonomy by the respondents of this study. What students missed was that autonomy is not an entire emancipation from all the educational bodies; however it can be attained with negotiation and support from the instructors (Nguyen, 2014). As it is evident students were aware of the importance of characteristic traits of the learner for the concept of autonomy. Sociocultural aspect can similarly be found to be relevant within this current research in that according to the remarks some interviewees made they could better learn with or/and at the presence of their friends, or shared the things they learnt at school with their home mates or other friends, and also simply told all the subject matter to their immediate surroundings they learnt at school. One should keep in mind the sociocultural perspective

should not be mistaken for dependency on the other people, rather it is a way of reinforcing and internalizing the subject they newly learnt.

As regards with describing themselves as autonomous or not, of all the experimental group respondents, only a quarter of them openly expressed themselves as autonomous while another quarter showed a tendency of calling themselves partially autonomous. Another quarter stated that indeed they lacked any goals, purposes, curiosity, eagerness and the joy to learn and the remaining responses basically revolved around the matter of low motivation. As the connection of autonomy and motivation in this study can be traced, there have been several investigations as well into the construct of learner autonomy (Nguyen, 2014) that give lack of motivation as a threat for growing autonomous. For instance, in Nguyen's (2014) study, the instructors reported that some of their students did not have any eagerness to take charge of their own learning, which would lose them the hope for fostering autonomy. It is claimed in the study that Vietnamese educational system did not have a structure of promoting learner autonomy. Similarly, it will not be too wrong to share the same claim that holds some stance for the Turkish educational system too, in which although many innovations have been proposed and implemented, students in the Turkish schools can hardly be thought without the teachers or instructors. Asian countries unlike the European ones tend to display more resilience in raising more autonomous students.

### **e-Learning Readiness Level for Control and Experimental Groups**

The level of e-learning readiness did not show any significant difference between the study groups. This could have been due to their age. That is, both groups ranged between 18 and 21 in terms of their age, and they were already frequent users of the Internet and any technological devices like smart phones, laptops, computers and other devices in their lives. This supports the idea that the more they make use of such technological advents, the more they get competent in them. And their level for e-learning readiness did not show a significant difference at the end of the study because participants of both groups were already e-learners in their lives. What they stated in their remarks also bears that they use a lot of online sources for their studies, and both practicality, like not

having to be carrying bulks of books, or being confined to the libraries for checking something in a book is a great luxury for them and they like benefitting from that. As they stated books and print sources, blackboards are replaced with CDs, soft sources, the Internet, smart boards, games, music, movies which all contribute to self-initiated learning. Apart from that, mobile phones, tablets and PCs all help a student learn on their own, and the e-learning readiness level of the students is high. The fact that analyses run showed no significant result may be explained by the participants' verily being frequent and competent users of the technological devices and making use of the innovations in that sense. In the surveys they were administered, 93% of the study group indicated that they had their own PCs, and tablets, and all of them reported that they used mobile phones. Having such information would also uncover the fact that the participants of the two groups were already in close touch with technology and they do their self-work on those devices and applications outside the classroom.

Besides the demographic aspect of the groups, we have to keep in mind that not all students in Turkey have the guarantee for employment after they graduate as much as the ELT graduates. In that sense, students of ELT Departments in Turkey are self-confident in that they do not have much difficulty in getting employed by the state and the private sector when they graduate. This fact also contributes to their self-confidence and their self-esteem as learners, and, similarly, as it is the case in this study, in their personal reports they expressed that they were highly ready for e-learning and would do better with self-initiated learning in their education.

### **Use of Vocabulary Learning Strategies**

Language learning is closely connected with word knowledge and if a learner does not use effective learning strategies in his/her learning process, the whole language learning can be a frustrating one (McCarthy, 2011). But as there are hundreds of thousands of words in a language, the idea of learning a language gets to be too frustrating for the person to take the lead at first place. In that long-lasting process of language learning, one needs techniques to effectively grasp meanings of the words. In that sense, vocabulary learning strategies become vital for high achievers in language learning.

In this study, both the control and experimental groups were given moderately using memory strategies for vocabulary learning. Related literature hosts a great number of studies (Scafaru & Tofan, 2000; Alm-Lequeux, 2004; Gardner, 2007; Lip, 2009; Şener, 2015; Li, 2009; Xu, 2010; Asgari & Mustapha, 2011; Byon, 2012; Yang & Wu, 2015) highlighting the importance of memory strategies in language learning. Therefore, the students in this study were aimed to be investigated whether they made use of those strategies, and if yes, what was the degree of their use. The findings showed that both groups were moderately making use of memory strategies, with no significant change at the end of the study. In the experimental group accounts of the students, some students accepted that they benefitted from WBC teaching in their way of vocabulary learning by having extensive examples from corpus which also enhanced their peripheral knowledge. Concordance lines, some of them noted, were extremely helpful to gain them more information about the usage, connotation and the linguistic and idiomatic aspect of the new word. Students suggested more use of concordances, regular quizzes on them, daily word lists, more Turkish meanings of the words as they adhered more effectiveness with such practices for the vocabulary development. Despite all these benefits of WBC, half of the experimental focus group reported that they had no change in their vocabulary learning strategies. Similarly, half of the control group interviewees agreed that there had been no change in their vocabulary learning strategies. This is strongly in line with the fact that language learning strategies are resistant to short-term changes, that is it requires a long time for a learner to change his/her learning strategies. As the current study is a one-academic term study, even if there was a change in the learning strategies of the students, it could have taken longer time to be realized even by the learner himself/herself. For some students, however, there occurred a change in their vocabulary learning strategies, while some others agreed that though their awareness for strategies increased, there was not a change in their learning strategies. Besides, some students expressed that there was a change and improvement in their learning strategies. All these support the findings in the studies carried out in Turkish context (Gökgöz, 2008; Öğmen, 2011) in that vocabulary learning strategies can be enhanced via the implementation of an online programme like the use of e-portfolios or other online tasks.

As regards with the individual differences, we should always keep in mind that what students bring into the classroom is a host of varying features like their origins, sociocultural and economic background, language aptitude, social or asocial learners and as such that embody them. To be able to manage that wide range of differences, students should be treated with high tolerance in the teaching practice. Common to all, there is not a best-for-all method in language learning that is why even the use of WBC teaching could be seen as not so beneficial for them by some of the students. It should be kept in mind that such a case would not be due to the shortcomings of WBC teaching, but rather due to the individual differences students are with. That is why, it is normal that WBC use had also been not so beneficial for a few students in the focus group.

### **Vocabulary Development of Control and Experimental Group Students**

To build a language, one needs the bricks of words. This study was an attempt to see the utility of WBC teaching compared to traditional vocabulary teaching method. The quantitative findings indicated no statistically significant difference between the control and experimental group. All of the control group responses about the suggestions for improvement of Lexical Competence course basically focused on making use of more technology like smart boards, computers by showing the phonetic aspect of the new words. Supporting that, experimental group interviewees highlighted the importance of COCA in their course and how effectively they made use of it. This finding is in line with studies (Oberg, 2011; Ma, 2013; Ebner & Ehri, 2013; Kilgarriff, Charalabopoulou, Gavriliidou, Johannessen, Khalil, Kokkinakis, Lew, Sharoff, Vadlapudi, & Volodina, 2014) which suggest making use of more technology in vocabulary learning. Apart from the technology, most of the control group interviewees also noted the crucial aspect of being active students and carrying out different language activities in the classroom to improve language skills and vocabulary size. Active students are taking more responsibility in their learning process and this dovetails the autonomy to be instilled in the language learners.

Vocabulary knowledge is seen as a strong predictor of language performance (Stahl & Fairbanks, 1986; as cited in Fisher & Grey, 2014) and the acquisition of the language skills (Fisher & Grey, 2014). In that regard, the use of

corpus is beneficial not only in enhancing the performance of the language learners but also in the attainment of the linguistic skills. WBC is helpful in contributing to the productive vocabulary knowledge of the learner (Poole, 2012). Receptive vocabulary knowledge gets activated by the help of WBC in the learner and that contributes to the proficiency of the learner. In his study that investigates the effectiveness of concordances, Poole (2012) found that receptive skills of the control group students developed while in the corpus-used group showed improvement in the productive skills too. This result also supports that students gain more familiarity with the language by getting more exposed to the authentic examples from a wide range of registers. These points prove the effectiveness of WBC in language learning.

Control group students suggested a more fun class in that students could not perform well if they did not enjoy the course. In order to have schemata to build new knowledge around, students need to have a certain development in their process of learning. The more words they know, the more they understand the course and they read or hear in the target language. In order to achieve such an accomplishment, students would have a clear comprehension of the subject matter in the class and improve more from their present level. Students of the control group did not know anything about WBC and yet they frequently suggested a more use of technology in their courses. This proves that students need a more technology-enhanced course with a variety of sources and modules in the teaching practice.

As for the objectives of the Lexical Competence course, according to the responses of the students, only half of the interviewees from both groups reached the objectives of Lexical Competence course. This depth reveals that students were indeed not fully satisfied with their teaching practice in their course and their expectations were not met by the teaching method they were delivered. In some of their remarks it was noted that the course could have been given in a more advanced level, and it was effective for some students but not so for some. The class size was another problem that students mentioned in their accounts for not being in a too crowded class. This outcome may be indicative of not having a significant difference between the vocabulary gains of both groups.

Implementation of WBC in the current study showed how students reacted to the use of corpus in their learning process. Though not all students were satisfied with the degree of the objectives they reached, almost the entire experimental group admitted that they benefitted from it, and some stated that they would definitely continue using it in the future. Not having a significant difference between the gain scores of each group can be due to their not being motivated as some of the interviewees noted in their remarks.

Student beliefs about the language are another factor that could have played a significant role in the findings of the current study. As Chan (2015) pinpoints students sometimes have wrong language beliefs, that is, reading or listening skills are not understanding all of the text one reads or the person one listens to, but rather to have the capability to continue the dialogue and conduct a true communication. In that regard, students of this study may have differing beliefs about language learning and skills, so their scores did not yield a significant difference in their gain scores at the end of the study.

Higher educational system of Turkey can also have a role in the results of the study in that due to frequent changes tried in the educational system, the educational stakeholders such as students, teachers, and educational institutions may face difficulties to adapt themselves for each change which occurs more frequently than expected. To exemplify, Lexical Competence course was a compulsory course in the official programme of the ELT Departments of Turkish universities, but as of 2017, this course was not included in the ELT curriculum anymore and instead there is a course "Structure of English". Students as well as the instructors have to prepare themselves for such changes. As the courses in the curriculum keeps changing, compulsory courses and elective courses also are reorganized. Some courses are revised and some others are included in the curriculum instead. Taking charge of such a thorough transformation would not yield positive outcomes if it occurs too frequently. Preparation for the course, course materials, teaching methods, contents of the courses and more become detrimental in enabling each higher educational stakeholder in the Turkish system to flourish. Instead of abrupt changes in the curriculum, long-lasting educational systems would yield more fruitful results for a better education. Besides the curriculum national exams also are changed, and the participants of the current

study sat the university entrance exam (YGS/LGS) which was changed last year to YKS. The administration, curriculum, subject matters also changed with the change of the exam. Therefore, such radical changes do not have a positive impact on the overall performance of the students across the country nor can the stakeholders feel safe about the newly transformed application.

All in all, it should be kept in mind that, a total dependence on technology cannot be beneficial in ESL and EFL just like a total lack of technology is not. In other words, a total dependence on the use of technology hinders language acquisition and learning in the sense that students need to experience and be exposed to actual communication taking place in the classroom between them and the teacher. Methinks, regardless of the level of education, teachers are to stand as role models in their profession, especially in any department at the faculty of education as they are professing in the teaching realm.



## Chapter 6

### Conclusion and Recommendations

This final chapter articulates a brief summary of the current research, gives a conclusion and provides pedagogical and methodological implications as well as some recommendations for further studies.

#### Summary of the Study

This study was aimed to explore the influence of a WBC teaching on the development of learner autonomy, e-learning readiness, the use of VLS and the development of vocabulary size. The study had two groups: one control and one experimental group. The study examined the preliminary perceptions and levels of the students at the beginning, and after the implementation of the WBC teaching, both groups were examined at the final part of the study. Besides the quantitative records of the students, a focus group was determined and through interviews participants from both groups contributed to the dataset with their responses in answering the research questions.

The present study followed a quasi-experimental research design, which compares the gain scores of the experimental and control groups, and make use of random assignment of the experimental group participants. Qualitative part of the study was composed of content analysis, which provides more depth with responses of the interviewees from both groups. The students were given a personal information form, which included their demographic details like age, gender, type of high school they graduated from. To discover the autonomy level of the students, both groups were given Autonomy Perception Scale, developed by Demirtaş (2010) with no sub\*constructs and composed of 30 items with 5-point Likert type scale. To measure the e-learning levels of the students, Yurdugül and Demir's (2016) The E-Learning Readiness Scale of University Students was administered, which had six sub-dimensions: internet self-efficacy, online communication self-efficacy, self-directed learning, learner control and motivation towards e-learning, and composed of 33 7-point Likert type 33 items. In order to measure the use of VLS, of Schmitt's (1997) taxonomy of Vocabulary Learning Strategy Inventory, Memory Strategies Scale was used. The questionnaire is composed of 27 items; all in 5-point Likert type items with single construct. To

measure the vocabulary size and development of the students, Nation's (1997) vocabulary size test was administered, made up of 10 questions, each representing 1000 words for each level. The test is divided into 14 bands making up 14000 words in English. Of the mixed method research design types, this study made use of an embedded research design. That is, the interviews were used to scrutinize more on the quantitative findings. The semi-structured interviews were conducted with the focus group students, and the responses were transcribed and coded with content analysis method. The study was conducted with students of ELT Department, Faculty of Education at two state universities in Ankara. The quantitative data were collected at participants' classrooms, whereas the qualitative data collection procedure was carried out at the control group's university library rooms, which are particularly used for individual studies as such. The quantitative analysis of the dataset was conducted through SPSS 23.0 package, and the qualitative data were analyzed with *Nvivo 10* software programme.

The analyses of the study mainly yield the following results:

1. The first research question attempted to explore if there was a statistically significant difference between the pretest scores of both groups with regard to their autonomy level, e-learning readiness level, use of VLS and the vocabulary size. The findings demonstrated that there was not a significant difference between the two groups in the variables measured. The personal information form which also asked about their university entrance exam scores and also the detailed description of the students about the subject matter test achievement levels (presented in Methodology chapter) also supports this finding in that both groups were pretty close to each other in terms of academic and linguistic performance and level. Apart from the vocabulary size, other variables of the study like learner autonomy, e-learning readiness and use of VLS also did not differ from each other, conclusive of that can be suggested that both universities' having close acceptance scores is also an estimator of some other elements.

2. The second research question was sought to explore if there occurred any statistically significant difference between the posttest scores of both groups in terms of their learner autonomy level, e-learning readiness level, use of VLS and vocabulary size development. The statistical analysis run yielded no significant

difference between the study groups. Although the reasons can be deriving from of a host of sources like their being at close levels to each other in both academic and linguistic sense, the accounts of the experimental group students were mostly focused on the lack of motivation as their general situation. Some stated that the reason behind was intrinsic; some others saw the reason outside, while others could not precisely state the reason behind. For some who took outsiders as the source of their low motivation, instructor played a great role in their state. To exemplify, the instructor was expected to be more energetic while teaching; as low tone of voice, slow movements, being glued to the stage may cause students feel less motivated and enthusiastic about learning. Psychological aspect is a crucial part to the concept of learning, which is also revealed in the remarks of the control group that they could have enjoyed more new examples from different sources and thus had more fun during the lesson. Apart from that, the duration of one academic term could have been too short for the students to show a higher development in the levels they were examined. Also the class time was three-hour period per week, as some students noted it could have been longer so that they could benefit more from a variety of activities. Some suggestions of the students were online speaking sessions, more speaking chance for the students during courses, use of different sources, more and a careful use of technology. In line with these, all of the control group interviewees also highlighted the need for technology like smart boards, computers by showing phonetic aspects of the new words, which supports that students are aware of the fact that knowing a word is not only knowing its meaning but also its pronunciation too, and some stated that the connotational knowledge of the word is also necessary for having a full mastery over the words. Though students of the control group had a traditional teaching approach along the entire term, their suggestion for the inclusion of technological use to the course implies that they could have gained higher scores in the vocabulary size test. They also highlighted the need for new types of activities to improve language skills and vocabulary size and also suggested the use of more different examples in more sources. Another suggestion was a regular testing on the vocabulary knowledge like with quizzes. All these show that control group students were in need of some improvement in their course. Although control group students did not mention that they lacked motivation for the course, some of the experimental group interviewees stated that they did not have

motivation. Apart from the psychological aspect of the reasons, the class size was an important issue for the control group students. As the control group was more than three times crowded than the experimental group, it was hard not to be realized by the control group interviewees who mentioned the class size as a drawback, and suggested a smaller class size for a more effective course procedure. This is in line with the fact that although the experimental group students had a smaller class size their scores in the vocabulary size test and in other variables did not show a dramatic difference at the end of the term.

3. The third and final research question was an attempt to detect any statistical difference in participants' level of learner autonomy, e-learning readiness level, use of VLS, and the size of vocabulary knowledge across the time. The analyses gave no significant results for the variables mentioned. It could have been about the duration of the implementation, that is, one academic term could have been too short for the experimental group students to develop in the variables measured. Apart from that, the implementation could have been more appropriate for the students to get higher achievement in their scores. In order to do that, a needs analysis could have been run with each member of the class and private meetings would be helpful for coming up with more concrete suggestions and views. Such practices may also help the students get into autonomy in a direct way, and take active roles in their learning even from the beginning. In that sense, the results of this study also corroborate the argument that apart from psychological factors of the learner, environmental factors, like the guidance from the teacher and learning conditions also play a critical role in the formation of different dimensions of learner autonomy in the student (Zhong, 2018). Some of the experimental group interviewees stated that they lacked motivation, although the control group students mostly complained about the class size of the group as a debilitating effect on their learning to occur. Therefore, the possible problems could have been solved before the term started, and this would enable all the stakeholders in the realm of education benefit more from the process.

Apart from the psychological aspect, an overall evaluation of the course for both groups differed in the sense that though half of the experimental group interviewees stated that it was not a successful course, half of the control group interviewees noted that it was definitely a great course. Students of both groups

stated their views that technology immensely contributed to language education, and some give examples from their own experiences, highlighting the chance of individual efforts and active roles taken by the students in their learning process. While some were content with the degree of technology use in education, some other interviewees from each group criticized the general situation of education for not having an ideal and sufficient degree of it. Both groups showed a great agreement on the relationship of technology use and learner autonomy. They discussed the positive impact of technology and its connection with autonomy. While half of the experimental group interviewees accepted that they reached the objectives of the course that they had at the beginning of the term, the remaining students was not so sure that all objectives were attained by all students. The students of each group expressed that they did not have realize a change in their VLS while learning a word after the course. Although half of the control group interviewees stated that there was no change in their strategy use, some others said their strategies changed and improved. One interviewee of the same group admitted that s/he started having a strategy after this course and another one expressed that it did not change but improved.

### **Pedagogical Implications of the Study**

The current research has been in an attempt to provide some implications for the teachers, educators, language teachers, administrators, teacher educators, researchers and ELT students, or any university student majoring at any depart of Faculty of Education. This study can give them an idea about the design of language courses and how to utilize technology, WBC to be more precise, and how to contribute the learning process of the students. Using technology means addressing to more senses of each student, and to keep in mind that new generation is a group that is born into the technology, we cannot strip them off technology when they come to school. Therefore, making use of it will yield more fruitful results in language learning process.

Tremendous changes in the world of innovations have been pushing the educational systems into a constant seek for new paths for better and up-to-date teaching practices. In this sense, MoNE has been trying new conducts for updating teacher training programmes to train more modern teachers who could

embrace any possible changes and new developments in the education of students, which will result in raising teachers qualified in all the competences in the teaching profession. The results of the study showed that students would want more contact and use of technology during the lessons, and try new ways for benefitting from the new advances. Findings of this study showed that students were content about using WBC, though some had motivational problems as well as some other problems driven by some other sources. In that regard, applications which enhance the word knowledge and help the learner to improve their language skills can be promoted to be used in language classes. They can be open to new changes and do something outside their regular teaching practices.

Another implication is for the students. Just like the teachers and instructors, students can also be given the opportunity to use WBC and any other technological applications for their learning. This will enable them to be more open to changes and a variety of sources will be at their service for their learning.

Administrative support from the faculty and department can be given as another implication to be provided to encourage the teachers for new practices.

### **Methodological Implications of the Study**

This study is intended to contribute to the literature on WBC teaching in English language teaching and learning by providing fruitful insights into the effectiveness of it in regard to its influence on the development of learner autonomy, e-learning readiness level, vocabulary learning strategies and vocabulary size improvement on a number of outcomes in fresh year students of ELT. In order to have a deeper analysis of the whole process of teaching, student views are critical to be taken for any implementation in their educational life (Steen-Utheim & Foldnes, 2018). That is why the qualitative data of this study included student feedback about the course at hand in the hope of detecting problematic points and eliminating them as well as strengthening the positive aspects of the implementation.

Another point to make about the methodological aspect of the study is enriching the study with qualitative method. Although related literature has been enjoying numerous studies in quantitative method, apparently, there is a tremendous need for qualitative studies. In this regard, the qualitative part of this

study was benefitted in this study which provided a more evidence-based stance for the researcher to have a say in the actual practice of the course. For further studies, the amalgamation of both research methods will enable the field experts and researchers to better understand the quantitative findings, thus, contribute the language teaching field with more salient views.

## **Recommendations**

This section provides some recommendations for further studies in the field of learner autonomy. The findings of the study demonstrated that a WBC teaching does not statistically promote learner autonomy and other dependent variables of measured in this study. It is recommended that the instructors should train students to understand the importance of autonomy and the instructors themselves should be more aware of the autonomy to be enjoyed at class. They should enable and engage their students to have more control in their learning process. In that regard, special courses, seminars or even workshops on learner autonomy can be prepared for the development of the students. Training can also be provided for the instructors too to gain them a deeper understanding and enhance the quality of their teaching and keep them up-to-date with both knowledge and information. In order to do this in the long run, pre- and in-service teachers should be given more opportunities and time to be fostering a high level of awareness for learner autonomy in their teaching. It is also important to highlight that low salaries of the instructors keep them a bit off the motivation to perform at their best, which is in line with some other researchers (Oliver, 2004; Nguyen, 2014; Pham, 2006) to keep them up-to-date.

Longitudinal researches as well as qualitative ones are recommended for a clear understanding of the student experiences in the learning process and the influence of WBC teaching on learner autonomy and other dependent variables of this study.

A larger sample size another point to be suggested for the further research to provide more generalizable results for the related literature. The sample groups of this research were from two large-scale universities in Turkey, and as they have been amongst the top universities of Turkey, the results of this study may not be generalizable to the other universities. That is why it is recommended that further

research be conducted with the inclusion of more groups from many other universities.

Student views should be taken by the instructors or the administrative boards about how to benefit it more before using web-enhanced teaching practices. In that regard, more experimental studies should be highlighted to be carried out. Also the course type should be taken into account while determining using WBC teaching. That is, not all courses in the department can be suitable all at once for using WBC teaching. Even if they all are, the degree of it, how and when to use it, may differ from course to course. That is why the instructor should be highly knowledgeable and qualified in determining such details and making such decisions. The decision can also be taken with other colleagues, and they should discuss and share their views about the conduct of the courses. Sometimes there can emerge need for administrative support with the instructors and the institutions should provide them with sufficient support and reinforcement.

Besides student views, it is highly suggested to consult the instructors about the entire process of the course. In the conduct of the lesson they are to observe the dynamics of the classroom, therefore, their views are crucial for a complete understanding of the classroom practices. Moreover, consulting the instructors may help them to monitor themselves which may bring about awareness in their teaching practice and they may realize some points in the classroom.

In order to foster autonomy in the students, they should be given active roles in every stage of their learning process such as determining the materials, methods and techniques, setting objectives and planning assessment style. In support of this, students should be given the chance to self-assess their learning process and pinpoint their weaknesses and strengths in order to encourage them to grow self-confident and more aware of their weak points to improve them.

As class time is a limited span, students should be given more out-of-classroom activities so that their work will not be confined into the class time. Related research also supports that extended learning promoted a long-lasting learning, which is one of the ultimate goals of the educational systems.

Student portfolios should be kept in order to follow the developmental stages of the each student. This will also gain the students some awareness as



well as responsibility of the entire process of their learning. The problematic points can be detected with the help of those portfolios and the issues can be resolved with each student having the problem with private meetings during the office hours of the instructors.

This research was conducted with two state universities in Ankara. In order to have more generalizable results participation of students from other universities can be suggested. Besides that difference, individual differences such as motivation, learning strategies, aptitude, educational and sociocultural background should also be investigated. Moreover, to have a more global aspect of such a study, some foreign universities can be included to the study for further investigations.

Related literature lacked comparative studies in the Turkish and foreign countries in the conduct of WBC teaching. Therefore, it is highly suggested the cross-cultural case studies to be conducted as it will contribute to the field in understanding the effect of cultural differences on learner autonomy and other dependent variables measured in this study during a WBC teaching practice.

It can also be suggested that there should be more research on the classroom arrangement and overall classroom dynamics of the Turkish students to promote learner autonomy. Both groups of the study were seated in the traditional way like the instructor sat at the desk and sometimes stood up, while students were sitting in rows and lines. It is the traditional style of the classroom and may have emerged to be so in time due to the fact that instructors feel at ease and rather comfortable at their desk and need no change in their zones or the students'. Therefore, in order to be able to understand the results of this study, there could be more research analyzing the impact of the classroom arrangement for fostering autonomy in the classroom.

Much literature highlights the need for the WBC teaching practice to be investigated more. Although there are an increasing number of classes making use of WBC teaching, not all are thoroughly analyzed or provide feedback available in the related literature about the process and the outcome of the practice. Therefore, a lacking feedback lies in the outcome of the WBC teaching.

Apart from the general feedback for the WBC teaching, course content and the aims of the courses should be openly given to the students and at the end of the term the degree to which students reached those gains and what goals of the students set at the beginning of the term have been achieved by the students should be expressed and discussed in the classroom. In that regard, discrepancies about the conduct of the course encompassing all the teaching process should be scrutinized by the students and the instructor as well as the positive implications of the practice for a finely tailored course practice for the following terms. The problematic points should be highlighted and student suggestions for the improvement of the teaching practice should be taken.

The learning materials are also a point to be considered in the course of learner autonomy development. Books and materials that place the instructor at the center of the lesson are far away from being supportive for learners to attain autonomy. At that point, instead of completely new texts, the ones which are familiar to the learners, such as local texts in the target language can be included so that students can feel that they can take control in their learning. In that sense maybe having the students review the texts before the courses can be beneficial to observe whether they need the direction of the instructor to comprehend and study the material or they can take control while studying.

Especially the qualitative findings of the study demonstrated that students are not so integrated into their learning process actively as they are given the chosen texts, materials, exams and courses. Unfortunately, they are used to preparing for exams which are most of the time written ones. In that respect, in order not to force students for the exams to pass, instructors can be trained for other types of assessment. In this way, students can be more actively engaged in their learning process. This can also help the instructors to apply new teaching techniques in their teaching practices.

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## APPENDIX A: Control Group Syllabus

### HACETTEPE ÜNİVERSİTESİ

#### İDÖ180 - SÖZCÜK BİLGİSİ

#### DERS SORUMLUSU:

#### THE CONTENT AND ASSESSMENT

WEEKS	TOPICS
WEEK 1	Introduction, strategies for vocabulary learning, morphemes and words
WEEK 2	Types of meaning: polysemy, synonymy, collocation, connotation, register
WEEK 3	Word-formation: abbreviations and acronyms, prefixes, suffixes
WEEK 4	Word-building and word-blending, global contact and language enrichment, easily confused words
WEEK 5	Idioms and phrasal verbs
WEEK 6	Functional vocabulary
WEEK 7	Studying thematic vocabulary: Work and study
WEEK 8	Studying thematic vocabulary: Society and institutions
WEEK 9	Mid-term exam
WEEK 10	Studying thematic vocabulary: The media
WEEK 11	Studying thematic vocabulary: Technology
WEEK 12	Studying thematic vocabulary: Basic concepts
WEEK 13	Studying thematic vocabulary: Aspects of variations
WEEK 14	The summary of topics
WEEK 15	Getting prepared for the exam
WEEK 16	FINAL EXAM

#### ASSESSMENT

EXAMS	PERCENTAGE %
Mid-term Exam	40
Final Exam	60
Total	100

#### REFERENCES

McCarthy, M. & O'Dell, F. (1994). *English vocabulary in use*. New York: Cambridge University Press

## APPENDIX B: Experimental Group Syllabus

### English Language Teaching Department

#### Lexical Competence, Y1110A

**Instructor(s) name(s) and contact information:** xx

**Email address:** xx

**Office location and phone:** xx

**Office hours:** To be announced later.

#### *Course Description*

The course is a compulsory course involves the focus on increased-awareness of lexical competence of the students. It is conducted through lecture and hands-on experiences on several lexical components of English. The course involves authentic examples of English language. The students are given certain tasks in relation to the lexical items presented throughout the course.

#### *Course Objectives*

Students who complete this course successfully will be able to:

- raise awareness about English vocabulary and its relationship with the language structure.
- learn about vocabulary learning strategies.
- be aware of different types and use of lexicon (on-line and printed).
- use corpus for searching vocabulary.
- learn about idioms, proverbs, collocations.
- learn about the relationship of words with other words such as synonym, antonym, metonymy, metaphor, connotation and denotation.
- analyse the etymology and different dialects of words.



### ***Required Texts, Materials, or Equipment***

- Authentic materials from different sources (media-internet, newspapers, magazines, videos, literature)
- Words, Meaning and Vocabulary (an Introduction to Modern English Lexicology). London: Continuum. Katamba, Francis. 2005. English Words: Structure, History, Usage. London: Routledge. Complementary bibliography
- Singleton, D. 2000. Language and the lexicon: An introduction. London: Arnold Enkvist, N. E. (1973) Linguistic Stylistics. The Hague, Paris: Mouton.
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- The use of online corpora: COCA (Corpus of Contemporary American English)

### ***Class Participation***

- Classroom participation is necessary to follow the topics and the tasks given each week.

### ***Course Grading***

- Exams = 70 points (for midterm) & 70 points (final)
- Homework = 30 points (for midterm) & 30 points (for final). Detailed task description is given below.

### ***Course Policies and Information for Students***

#### *1. Attendance policy*

Attendance is required. The students have the right of being absent for 12 hours.

#### *2. Penalties for late work and policies on missed assignments.*

The regular students and all re-coursed students are required to follow the tasks assigned each week and submit on time. Late submissions will not be accepted and graded.

*Preliminary Schedule of Topics and Assignments*

Week/Date	Topics/Assigned Readings/Homework
<b>Week 1</b>	<p>Introduction to the course</p> <p><b>Task 1:</b> Take the vocabulary size test (<a href="http://my.vocabularysize.com">http://my.vocabularysize.com</a>) and report the result.</p>
<b>Week 2</b>	<p>Some definitions and key concepts about lexical competence and vocabulary knowledge; introduction to vocabulary learning strategies and vocabulary learning tools (corpora, online dictionaries etc.)</p> <p><b>Task 2:</b> Take dictionary entry for a verb that you want and mark the information provided using arrows.</p>
<b>Week 3</b>	<p>Some definitions and key concepts about lexical competence and vocabulary knowledge; introduction to vocabulary learning strategies and vocabulary learning tools (corpora, online dictionaries etc.)</p> <p><b>Task 3:</b> Register for COCA. Choose two newly learned words. Analyze 10 concordance lines for each word. Write a report about conclusions you have drawn about the use of the words.</p> <p><b>Task 4:</b> Search for at least five words about their frequency level in different registers of written and spoken texts (academic, fiction, magazine and newspaper).</p>
<b>Week 4</b>	<p>Morphological features: Parts of speech, prefixes, suffixes and roots.</p> <p><b>Task 5:</b> Select five prefixes and five suffixes from the in-class activities and find five words beginning or ending with the selected affixes for each using COCA. Write</p>

	<p>reports about the words with the example sentences taken from the texts in COCA.</p> <p><b>Task 6:</b> Choose an authentic text. Underline 15 words that you want and identify the roots and affixes.</p>
<b>Week 5</b>	<p>Morphological features: Word formation rules and processes (compounding, borrowing, neologism, blending, clipping, acronym etc.)</p> <p><b>Task 7:</b> Visit some websites dedicated to vocabulary reference. Find five words for each word formation rules and processes.</p>
<b>Week 6</b>	<p>Semantic relations with other words (polysemy, synonymy, antonyms, hyponymy)</p> <p><b>Task 8:</b> Select ten words from either in-class activities or any other words you want to search for. By using COCA, find out the synonyms and example sentences for each word. After choosing only one of the words from your list, organize a word web of the selected word via COCA.</p>
<b>Week 7</b>	<p>Denotation and connotation</p> <p><b>Task 9:</b> You will be given a list of synonyms and antonyms of a word. By using COCA, find out their connotative meanings and write reports about the findings giving an example sentence for each taken from the texts in COCA.</p>
<b>Week 8</b>	<b>Midterm Week</b>

<p><b>Week 9</b></p>	<p>Collocations</p> <p><b>Task 10:</b> Search the collocations of 10 frequent academic words (<i>indicate, process, required, research, significant, specific, major, issues, role, principle</i>). Illustrate the findings in a table consisting of the definition, collocates and sample phrases in example sentences.</p>
<p><b>Week 10</b></p>	<p>Collocations</p>
<p><b>Week 11</b></p>	<p>Lexical Inferencing</p> <p><b>Task 11:</b> Find an authentic text and underline 15 words that might be guessed using knowledge sources in lexical inferencing. Illustrate the findings in a table consisting of the underlined words, your guesses about their meanings and the knowledge sources you used that help you to guess the meanings.</p>
<p><b>Week 12</b></p>	<p>Lexical Inferencing</p>
<p><b>Week 13</b></p>	<p>Idioms and proverbs</p> <p><b>Task 12:</b> Select ten idioms which you want to search more taken from the in-class activities and search them in corpus. Analyze the example sentences in terms of their meanings and registers. Write reports about the findings including the example sentences which make the</p>

	meaning clearer for you.
<b>Week 14</b>	Idioms and proverbs
<b>Week 15</b>	Idioms and proverbs

*Disclaimer*

The instructor reserves the right to make modifications to this information throughout the semester.

**APPENDIX C: Control Group Classroom Seating Arrangement**

Front:



Back:

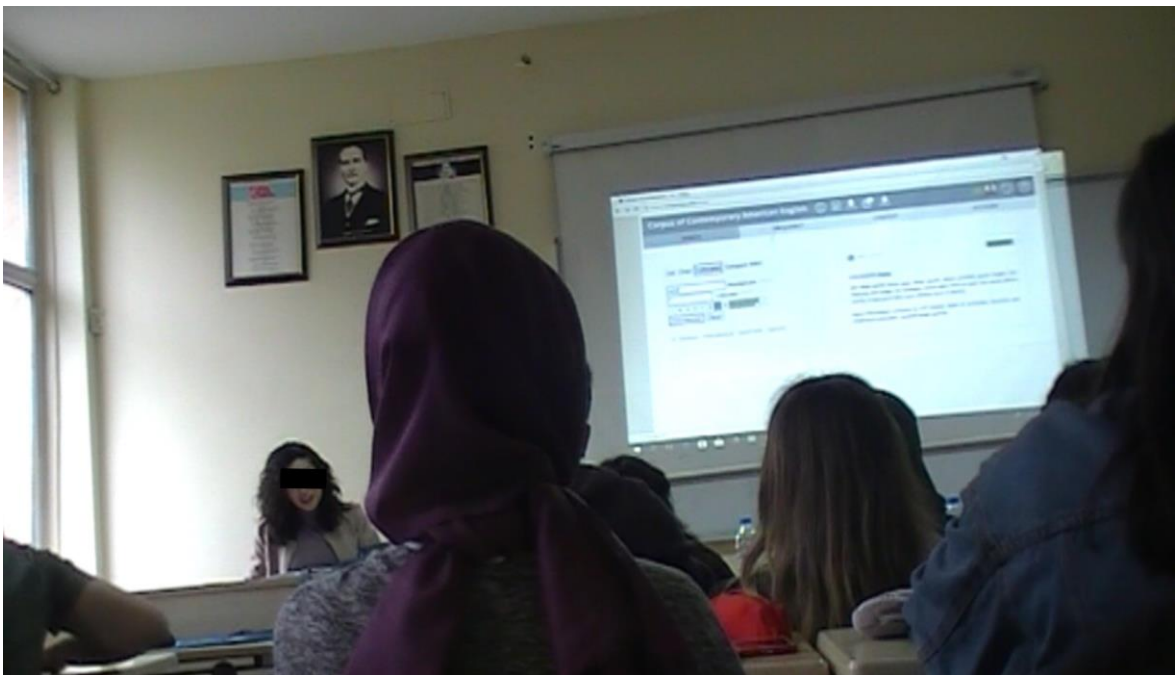


## APPENDIX D: Experimental Group Classroom Seating Arrangement

Front:



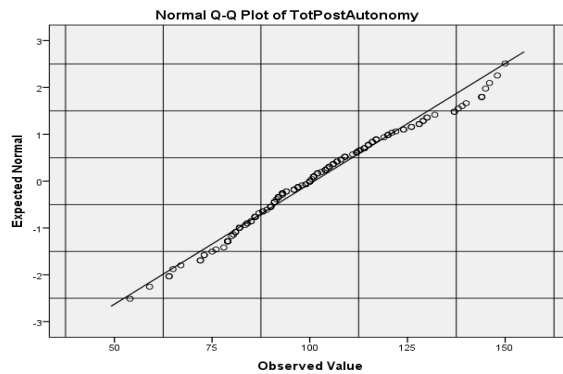
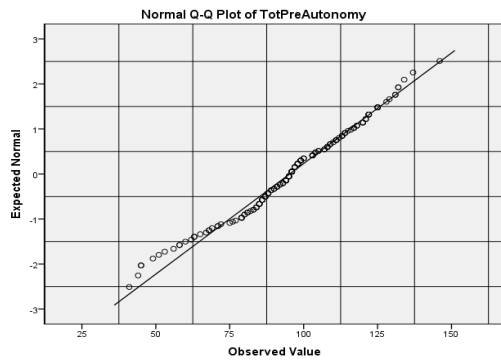
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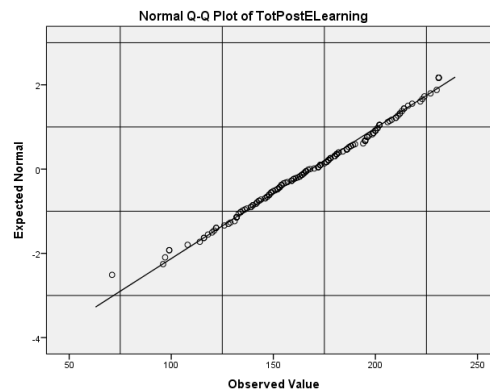
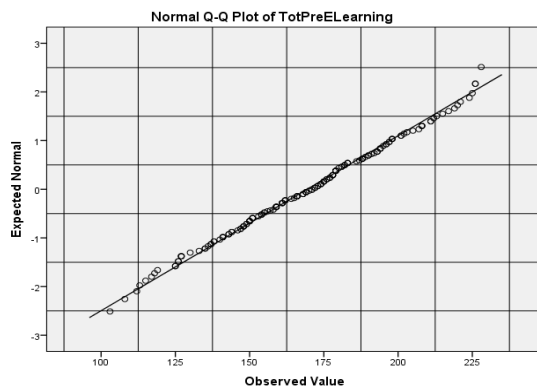
## APPENDIX E: Q\_Q Normality Plots of Data

Q\_Q normality plots of the pre- and post-test scores of the variables of learner autonomy, e-learning readiness level, VLS and vocabulary size test:

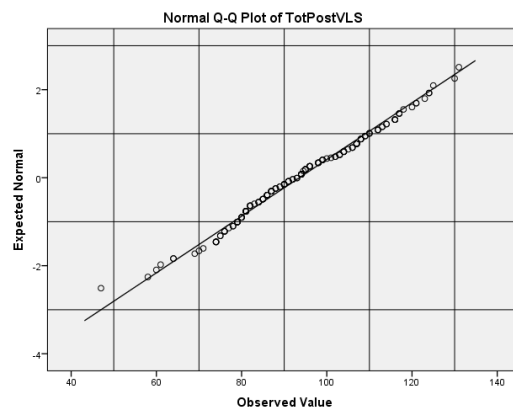
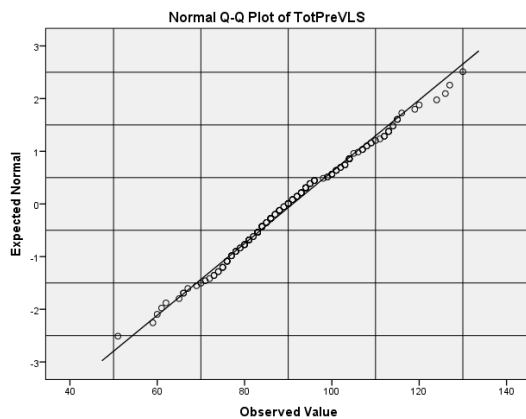
Q\_Q normality plots of the pre- and post-test scores of learner autonomy:



Q\_Q normality plots of the pre- and post-test scores of e-learning readiness level:

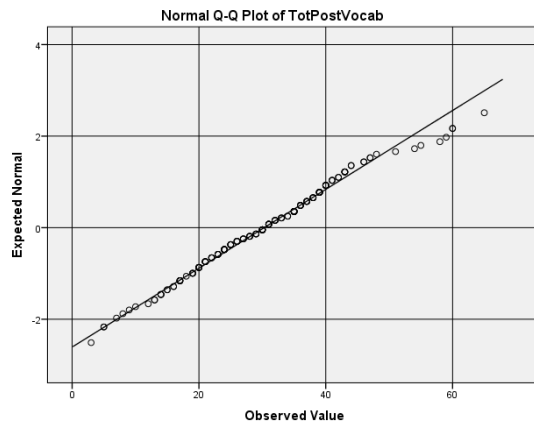
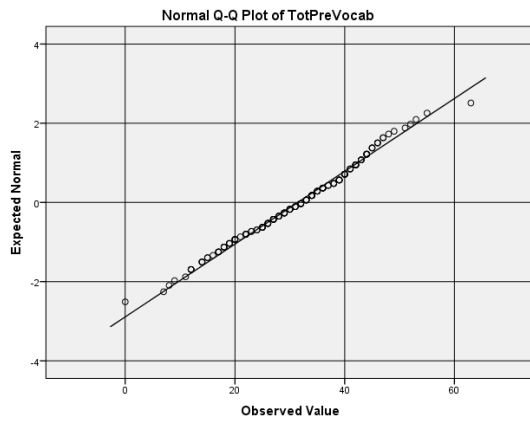


Q\_Q normality plots of the pre- and post-test scores of the use of VLS:





Q-Q normality plots of the pre- and post-test scores of the variables of vocabulary size test:



## APPENDIX F: Interview Protocol

**Interview Protocol Project:**

**Date of interview:**

**Place:**

**Interviewee:**

**School/Dept/Grade of the Interviewee:**

### **Technology and Language Education Interview Questions:**

1. Öğrenci/öğrenen özerkliği ile ilgili ne düşünüyorsun?
2. Özerk öğrenci özellikleri dendiğinde nelerden bahsedebilirsin mesela?
3. Kendini nasıl bir öğrenen olarak görüyorsun?
4. Bir dil öğrencisi olarak teknoloji kullanımı ile ilgili ne düşünüyorsun?
5. Dil eğitiminde teknolojiden sence nasıl bahsedebiliriz?
6. Bölüm derslerinde teknoloji kullanımı oranı ne olmalı sence? Şu anki durumu nasıl değerlendirirsin?
6. Derslerde değişiklik yapmak ister miydin mesela? Yapsaydın bu ne olurdu?
7. Teknoloji kullanımının özerk öğrenmeye etkisi için ne düşünüyorsun?
8. Sözcük bilgisi dersinde teknoloji kullanımından nasıl bahsedebilirsin?
9. Ders kazanımları dönemin başında neydi, sonunda erişebildiğini söyleyebilir misin?
10. Kelime öğrenme stratejilerin var mıdır? Varsa nelerdir? Sözcük Bilgisi dersinden sonra bir bu stratejilerinde bir değişiklik oldu mu?
11. Son olarak eklemek istediğin bir şey var mı?

## APPENDIX G: Consent Form

# GÖNÜLLÜ KATILIM FORMU

Bu araştırmanın amacı Hacettepe Üniversitesi ve Gazi Üniversitesi İngiliz Dili Eğitimi Bölümü 1. Sınıf öğrencilerinin Sözcük Bilgisi dersinde teknoloji kullanımının öğrenen özerkliğine etkisini incelemektir. Aşağıdaki maddelerin doğru ve yanlış seçenekleri olmadığı için maddeleri dikkatle okuyarak size en yakın seçeneği işaretlemeniz araştırmanın bulgularının geçerliliği açısından önemlidir. Bilgilerinizin gizliliği için anket formuna isim yazmanıza gerek yoktur.

Tamamen kendi isteğim ile “*Üniversite Düzeyinde Kelime Öğretiminde Teknoloji Kullanımı*” isimli araştırmaya katılmayı ve araştırma kapsamında bana verilen ölçekleri doldurmayı kabul ediyorum. Araştırmanın amacı ve araştırmaya katılmamdan dolayı oluşabilecek riskler bana araştırmacılar tarafından anlatılmıştır. Ayrıca araştırmadan istediğim zaman ayrılabileceğim ve kişisel bilgilerimin gizli tutularak üçüncü kişilerle kesinlikle paylaşılmayacağı özellikle belirtilmiştir.

**Katılımcı İsim:**

**Katılımcı İmza:**

**Tarih:**

**Araştırmacı:** Arş. Gör. Sümeyra BAĞATUR    **Danışman:** Prof. Dr. Nuray ALAGÖZLÜ

**Adres:** Hacettepe Üniversitesi  
Eğitim Fakültesi B Blok  
Yabancı Diller Eğitimi Bölümü  
İngiliz Dili Eğitimi Ana Bilim Dalı Beytepe Kampüsü  
**Tel.:** 0312 297 8587

**Cep tel:** 0505 493 6874

**e-posta:** sumeyra.bagatur@gmail.com

**İmza:**

## APPENDIX H: Personal Information Form

### ÖĞRENCİ DEMOGRAFİK BİLGİ SAYFASI

Cinsiyet: Erkek [ ] Kadın [ ]

Yaş: E-posta:

ÖSYM Giriş puanınız:

Fakülte/Yüksekokul:

Bölüm: Sınıf/Şube:

Ailenizin aylık geliri:

Sizin aylık geliriniz:

Mezun olduğunuz lise türü:

Öğretmen Lisesi  Anadolu Lisesi  Fen Lisesi  Meslek Lisesi

Kişisel bilgisayarınız var mı? (masaüstü, dizüstü, tablet vs.)

Evet  Hayır

İnternet bağlantısı olan Akıllı telefonunuz var mı?

Evet  Hayır

İnternete erişimde en çok kullandığınız cihaz hangisidir (Yalnız bir tanesini işaretleyiniz)?

Masaüstü  Dizüstü  
 Tablet  Akıllı telefon

Üniversite hazırlık okudunuz mu?  Evet  Hayır

Yurtdışında bulundunuz mu? Evet  Hayır

Yanıtınız Evet'se ne kadar süre bulundunuz?

## APPENDIX I: Ethics Committee Approval



T.C.  
HACETTEPE ÜNİVERSİTESİ  
Rektörlük

30 Mart 2017

Sayı : 35853172/ 433-1197

### EĞİTİM BİLİMLERİ ENSTİTÜ MÜDÜRLÜĞÜNE

İlgi: 10.03.2017 tarih ve 702 sayılı yazınız.

Enstitünüz Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Bilim Dalı doktora programı öğrencilerinden Sümeyra BAĞATUR'un Doç. Dr. Nuray ALAGÖZLÜ danışmanlığında yürüttüğü "DYNED Temelli İngilizce Öğrenme Programının Öğrenci Özerkliğinin Gelişimine Etkisi/The Influence of a Dyned Based Blended Learning English Program on the Development of Learner Autonomy" başlıklı tez çalışması, Üniversitemiz Senatosu Etik Komisyonunun 14 Mart 2017 tarihinde yapmış olduğu toplantıda incelenmiş olup, etik açıdan uygun bulunmuştur.

Bilgilerinizi ve gereğini rica ederim.

Prof. Dr. Rahime M. NOHUTCU  
Rektör a.  
Rektör Yardımcısı

## APPENDIX J: Declaration of Ethical Conduct

I hereby declare that...

- I have prepared this thesis in accordance with the thesis writing guidelines of the Graduate School of Educational Sciences of Hacettepe University;
- all information and documents in the thesis/dissertation have been obtained in accordance with academic regulations;
- all audio visual and written information and results have been presented in compliance with scientific and ethical standards;
- in case of using other people's work, related studies have been cited in accordance with scientific and ethical standards;
- all cited studies have been fully and decently referenced and included in the list of References;
- I did not do any distortion and/or manipulation on the data set,
- and **NO** part of this work was presented as a part of any other thesis study at this or any other university.

03/09/2019



Sümeýra BAĞATUR

## APPENDIX K: Dissertation Originality Report

03/09/2019

HACETTEPE UNIVERSITY  
Graduate School of Educational Sciences  
To The Department of Foreign Language Education

Thesis Title: Technology Utilization in Teaching Vocabulary at Tertiary Level

The whole thesis that includes the *title page, introduction, main chapters, conclusions and bibliography section* is checked by using **Turnitin** plagiarism detection software take into the consideration requested filtering options. According to the originality report obtained data are as below.

Time Submitted	Page Count	Character Count	Date of Thesis Defence	Similarity Index	Submission ID
03/09/2019	209	315093	04/07/2019	29%	1162440360

Filtering options applied:

1. Bibliography excluded
2. Quotes included
3. Match size up to 5 words excluded

I declare that I have carefully read Hacettepe University Graduate School of Educational Sciences Guidelines for Obtaining and Using Thesis Originality Reports; that according to the maximum similarity index values specified in the Guidelines, my thesis does not include any form of plagiarism; that in any future detection of possible infringement of the regulations I accept all legal responsibility; and that all the information I have provided is correct to the best of my knowledge.

I respectfully submit this for approval.

Name Lastname: Sümeyra BAĞATUR  
Student No.: N13142345  
Department: Foreign Language Education  
Program: English Language Teaching  
Status:  Masters  Ph.D.  Integrated Ph.D.

  
Signature

### ADVISOR APPROVAL



APPROVED  
Prof. Dr. Nuray ALAGÖZLÜ

## APPENDIX L: Yayınlama ve Fikrî Mülkiyet Hakları Beyanı

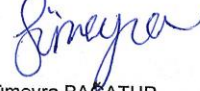
Enstitü tarafından onaylanan lisansüstü tezin tamamını veya herhangi bir kısmını, basılı (kâğıt) ve elektronik formatta arşivleme ve aşağıda verilen koşullarla kullanıma açma iznini Hacettepe Üniversitesine verdiğimi bildiririm. Bu izinle Üniversiteye verilen kullanım hakları dışındaki tüm fikri mülkiyet haklarım bende kalacak, tezin tamamının ya da bir bölümünün gelecekteki çalışmalarda (makale, kitap, lisans ve patent vb.) kullanım hakları bana ait olacaktır.

Tezin kendi orijinal çalışmam olduğunu, başkalarının haklarını ihlal etmediğimi ve tezin tek yetkili sahibi olduğumu beyan ve taahhüt ederim. Tezimde yer alan telif hakkı bulunan ve sahiplerinden yazılı izin alınarak kullanılması zorunlu metinlerin yazılı izin alınarak kullandığımı ve istenildiğinde suretlerini Üniversiteye teslim etmeyi taahhüt ederim.

Yükseköğretim Kurulu tarafından yayınlanan "**Lisansüstü Tezlerin Elektronik Ortamda Toplanması, Düzenlenmesi ve Erişime Açılmasına İlişkin Yönerge**" kapsamında tezim aşağıda belirtilen koşullar haricince YÖK Ulusal Tez Merkezi / H.Ü. Kütüphaneleri Açık Erişim Sisteminde erişime açılır.

- o Enstitü/Fakülte yönetim kurulu kararı ile tezin erişime açılması mezuniyet tarihinden itibaren 2 yıl ertelenmiştir.<sup>(1)</sup>
- o Enstitü/Fakülte yönetim kurulunun gerekçeli kararı ile tezin erişime açılması mezuniyet tarihimden itibaren ... ay ertelenmiştir.<sup>(2)</sup>
- o Tezimle ilgili gizlilik kararı verilmiştir.<sup>(3)</sup>

03/09/2019



Sümeyra BAÇATUR

"**Lisansüstü Tezlerin Elektronik Ortamda Toplanması, Düzenlenmesi ve Erişime Açılmasına İlişkin Yönerge**"

(1) Madde 6.1. Lisansüstü teze ilgili patent başvurusu yapılması veya patent alma sürecinin devam etmesi durumunda, tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulu iki yıl süre ile tezin erişime açılmasının ertelenmesine karar verebilir.

(2) Madde 6.2. Yeni teknik, materyal ve metodların kullanıldığı, henüz makaleye dönüşmemiş veya patent gibi yöntemlerle korunmamış ve internetten paylaşılması durumunda 3. şahıslara veya kurumlara haksız kazanç, imkânı oluşturabilecek bilgi ve bulguları içeren tezler hakkında tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulunun gerekçeli kararı ile altı ayı aşmamak üzere tezin erişime açılması engellenebilir.

(3) Madde 7.1. Ulusal çıkarları veya güvenliği ilgilendiren, emniyet, istihbarat, savunma ve güvenlik, sağlık vb. konulara ilişkin lisansüstü tezlerle ilgili gizlilik kararı, tezin yapıldığı kurum tarafından verilir\*. Kurum ve kuruluşlarla yapılan işbirliği protokollü çerçevesinde hazırlanan lisansüstü tezlerle ilişkin gizlilik kararı ise, ilgili kurum ve kuruluşun önerisi ile enstitü veya fakültenin uygun görüşü üzerine üniversite yönetim kurulu tarafından verilir. Gizlilik kararı verilen tezler Yükseköğretim Kuruluna bildirilir.

Madde 7.2. Gizlilik kararı verilen tezler gizlilik süresince enstitü veya fakülte tarafından gizlilik kuralları çerçevesinde muhafaza edilir, gizlilik kararının kaldırılması halinde Tez Otomasyon Sistemine yüklenir

\* Tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulu tarafından karar verilir.

\*  
\*  
\*  
\*  
\*



