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ÖĞRENCİLERİN BİLGİSAYAR DESTEKLİ DİL ÖĞRENİMİ VE WEB TABANLI OYUNLARA YÖNELİK TUTUMUNA İLİŞKİN BİR ARAŞTIRMA

YÜKSEK LİSANS TEZİ

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ISTANBUL SABAHATTIN ZAIM UNIVERSITY

INSTITUTE OF SOCIAL SCIENCES

DEPARTMENT OF ENGLISH LANGUAGE TEACHING

A STUDY ON STUDENTS' ATTITUDE TOWARDS COMPUTER ASSISTED LANGUAGE LEARNING AND WEB-BASED GAMES

MA THESIS

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Supervisor: Asst. Prof. Dr. Emrah Görgülü

İstanbul

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Sosyal Bilimler Enstitüsü Müdürlüğüne,

Bu çalışma jürimiz tarafından İngiliz Dili Eğitimi Anabilim Dalında YÜKSEK LİSANS TEZİ olarak kabul edilmiştir.

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ÖZET

ÖĞRENCİLERİN BİLGİSAYAR DESTEKLİ DİL ÖĞRENİMİ VE WEB TABANLI OYUNLARA YÖNELİK TUTUMUNA İLİŞKİN BİR ARAŞTIRMA

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Hâkim dil olarak tüm dünyada yaygın olarak öğretilmesinin yolunu açan bazı tarihi, siyasi ve teknolojik sebeplerden dolayı kontrol edilemez bir güce sahip olan İngilizce, evrensel bir fenomen olarak algılanmaktadır.

Ancak; içerik açısından fakir, teknoloji bakımından eksik olan öğretmen merkezli eğitim modeli, beklenen eğitim çıktıları ile gerçek sınıf deneyimi arasında bir kontrast yaratmaktadır. Dolayısıyla, söz konusu çalışma öncelikle öğrencilerin bilgisayar kullanımı ve dil öğreniminde web tabanlı oyunların verimliliğine yönelik tutumlarını araştırmayı amaçlamaktadır. Daha sonra elde edilen bulgular ışığında İngilizce öğretiminde günümüzde karşılaşılan düşük motivasyon, yetersiz öğrenme koşulları ve verimsiz sınıf ortamı gibi temel sorunlara somut çözümler üretilmesi hedeflenmektedir.

Bu amaçla, 2015-2016 eğitim-öğretim yılının son çeyreğinde, İstanbul Sabahattin Zaim Üniversitesi Zorunlu Hazırlık Okulu'nda eğitim gören ve yaşları 18-22 arasında değişen 231 katılımcının bilgisayar kullanım becerileri ve web tabanlı oyunlara yönelik tutumları üzerine görüşlerini almak için veri toplama aracı olarak iki bölümlü bir anket kullanılmıştır.

Katılımcıların, özellikle de erkekler öğrencilerin, bilgisayar ortamında kendini yeterli gördüğünü, yenilikçi fikir ve araçlara dayanan teknoloji ile bütünleşmiş eğitimi talep ettiğini açıkça ortaya koyan araştırma sonuçları, öğrencilerin başarısızlığına

uzun vadeli ve kalıcı çözüm olabilecek her an kullanıma hazır BDDÖ sistemlerinin yararlarından faydalanmak için yapılan yatırımları desteklemektedir.

Anahtar Kelimeler: Bilgisayar Destekli Dil Öğrenimi, Web Tabanlı Dil Öğrenimi, motivasyon, tutum, yabancı dil öğrenimi, eğitimsel oyunlar, geleneksel dil öğretimi

ABSTRACT MASTER THESIS

A STUDY ON STUDENTS' ATTITUDE TOWARDS COMPUTER ASSISTED LANGUAGE LEARNING AND WEB-BASED GAMES

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English is perceived as a universal phenomenon with its uncontrollable linguistic power due to some historical, political and technological reasons, which in turn has paved the way for this dominant language to be widely taught throughout the world.

However, teacher-centered instruction model that is poor in content and lacking in technology creates a contrast between the expected education outcomes and real classroom experience. Therefore, the purpose of the study is firstly to investigate students' attitude towards the efficiency of computer usage and web-based games in language learning. Secondly, the findings are aimed to offer some concrete solutions to fundamental issues presently faced in English teaching, such as low level of motivation, unsatisfying learning conditions and counter-productive classroom environment.

With respect to this objective, in the last quarter of 2015-2016 academic year, a two-part questionnaire was employed as a data collection tool to gather the views of 231 participants on their computer usage skills and attitude towards web-based games, who are students at Istanbul Sabahattin Zaim University Compulsory Preparatory School ranging in age 18 to 22.

The outcomes of the data clearly demonstrate that participants, particularly male students, regard themselves quite sufficient in computers, and they all demand technology integrated education that is based on innovative ideas and instruments, which advocates investments to embrace the possible benefits of ubiquitous CALL systems for long-term and permanent remedy for failure of students.

Key Words: Computer Assisted Language Learning, Web-Based Language Learning, motivation, attitude, foreign language learning, educational games, traditional language teaching

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To my students and colleagues

CHAPTER I: INTRODUCTION

1. INTRODUCTION

This introductory chapter provides an overview of this study, including the background of the study, the purpose of the study, the research questions, the significance of the problem, certain limitations of the study as well as the definition of terms used in the research.

1.1. Background of the Study

Computer development and technical progress have been flourishing over the past decades. In post-modern times, computers are extensively used in different fields including health and medicine, science, business, recreation and entertainment as well as education. In fact, they have become to play a vital role in our daily lives. Thus, language instructors are required to acknowledge multiple technological choices in their classes (Kamberi, 2013). It is obvious that with the help of visual information, computer-based learning materials are increasingly supported by all participants for instructional purposes. This study intends to offer a more comprehensive review on the journey of this pedagogical development both in the world and Turkey.

Coined into the language education in the USA in 1960s, Computer Assisted Instruction (CAI) expanded its scope of application thanks to the emerging possibilities and new technologies especially with multimedia and communications after 1990s. Although it was unlikely to benefit from computers for realistic interaction in Communicative Language Teaching (CLT) for a long time, computer-based technology gained importance in the education system and there has been a gradual improvement in terms of implementing more unrestrained, collaborating, student-centered language programs, and adapting materials (Tunçok, 2010).

Therefore, with the purpose of interpreting the relationship between capability of technology and language instruction various researches have addressed to the field. According to Warschauer and Healey (1998), nurturing rich environments with ‘real life’ contexts, Computer Assisted Language Learning (CALL) offers vast chances and new positive perspectives to learners to learn better while accomplishing a more interactive classroom.

In the literature, several scholars have attempted to justify the usage of computers in language classrooms. Murray (2000), as an advocate of this group, supports the idea that computerized acquisition settings assists students for the sake of

learner autonomy contributing to their productive skills for greater maturity in harmony with their individual personality.

In contrast to the traditional way of teaching with a blackboard and textbooks, CALL delivers instant and entertaining knowledge with the help of the alternative agents. As Pennington (1996) discusses in his book, the feature that makes CALL operational in any kind of instruction, its capability in providing present both quantitative and a qualitative input.

In this regard, the internet and mobile communication technologies have the foremost effect on educational institutions to address what today's learners need. According to the results obtained by Korte and Hüsing (2006), in European schools computers are used by instructors for every course and pupils are more motivated and attentive when the internet is included in this process. As a consequence of the power of these advancements, teachers cannot be immune to the changes. For this reason, as it is stated in a recent paper by L. Stošic (2015), all parties of education are facing a great challenge in improving and reforming the current informative practices.

Furthermore, pupils can use internet for improving their interpersonal and problem solving skills via games and applications based on collaboration and critical thinking (Harris, 2002).

Besides the advantages of these trendy elements for students, it also helps teachers to conduct online research to enhance curriculum-based learning. It plays a crucial role in the differentiation of instruction and enriching the content with audio-visual components. Another gain linked with the web based activities is to build confidence by bringing up new and innovative tasks through hundreds of different internet sites (Kessel, 2005).

Since assessment is a core part with regard to learning characteristics and training routines, e-assessment also has attracted increased interest (Stödberg, 2012). It exists as another key factor determining the learning outcomes and has become widely used by instructors. Considering its contributions such as time saving and immediate feedback, computer assisted assessment increases the frequency, objectivity and consistency of assessment (Bull & McKenna, 2004).

Taking into consideration everything stated above, the incorporation of electronic learning tools within the computer assisted environment induces students with freedom and high sense of perception that they are involved in a meaningful and communicative process to achieve their goals.

1.2. Purpose of the Study and Research Questions

This study intends to gain insights into the minds of students about the effects of Computer Assisted Language Learning (CALL) and web based games by investigating whether they think that there is any difference between the classroom teaching with the computer assisted practices and traditional language teaching techniques based on textbooks and overwhelming paper-pen worksheets.

Besides, it is aimed to provide useful ideas and proof to English Language teachers especially to the ones who have some doubts about taking advantage of these novice tools and unwilling to engage in untraditional procedures.

Therefore, the present study attempted to answer to the following questions in order to reach the objectives of the research:

1. What are İstanbul Sabahattin Zaim University Preparatory Students' opinions on the success and effect of application of computerized materials in education of English?

2. To what extent does the sex of students have effect on their attitudes towards presentation of subjects supported by computers and web based activities?

3. What are the views of learners about their computer skills and competence?

4. What are the advantages of using web-based games in foreign language teaching classrooms in terms of motivation and learning processes?

1.3. Significance of the Study

Although there are some scholars who oppose to CALL, numerous studies have revealed significant correlations between computers and online games with the fulfillment of shaping an enjoyable learning environment and thus they can provide satisfactory learning experiences for students (Kiili, 2005). Based upon the analysis of literature and findings obtained previous researches, the study will comprise the advantages and disadvantages of gaming experience and utilization of various web-based instructional methods.

As it seems that the influence of the old-fashioned lecturing methods is no longer effective enough, exploiting new educational technology appears inevitable (Yaghoobi & Razmjoo, 2016). In order to verify the validity of this approach, it is intended to evaluate the answers of the students in a quantitative evaluation.

Motivation and other related emotions are fundamental in every educational ecosystem because they play a key role in terms of different levels of cognitive and communication processes (Serrano-Cámara, Paredes-Velasco, Alcover & Velazquez-

Iturbide, 2014). The questionnaire and all conclusions about perceptions and attitudes of students with respect to games played by portable devices will advance our understanding on this issue.

Until today, CALL studies have mainly focused on a single or two skills such as reading and writing. However, communicative competence establishes as a vital skill in this era for global communication and advocates that learners must be fluent to be part of the international community (Poolsawad, Kanjanawasee & Wudthayagorn, 2015). Therefore, the study seeks to determine whether computer mediated communication techniques help students in speaking and listening.

1.4. Limitations of the Study

There are a few constraints of the study that ought to be acknowledged and interpreted carefully to identify the essence of the findings that are wished to be helpful for all shareholders of educational system.

The main problem with this research was the limited diversity of participants coming from similar social and cultural backgrounds. 231 participants ranging in age from 18 to 22, who are studying at Istanbul Sabahattin Zaim University Preparatory School, are not adequate in order for reliable and generalized conclusions to be applied to different locations and ages.

Secondly, the present study was mostly based on certain activities and games carried out on the computers and the internet, such as “Kahoot”, however, it is necessary to remind the fact that there is a wide array of educational technology tools with a full range of services. Therefore, the number and types of applications on which the data were gathered stand as a non-negligible obstacle.

Lastly, all information was gathered and investigated by quantitative methods, hence, the outcomes can only be documented through quantitative techniques. Furthermore, the number of items in the questionnaire is actually restricted, for this reason, it doesn’t seem satisfying enough to mirror the entire view of perceptions on CALL contexts.

1.5. Definitions of Terms

CAI: In this thesis, the term CAI is used to describe the usage of computers in any course either as for subsidiary or alternative to present materials.

CALL: In this study, Computer Assisted Language Learning (CALL) refers to teaching and learning foreign languages centered on information and communications technology applications and methods.

MALL: Mobile Assisted Language Learning (MALL) is used as another type of technology-enhanced language learning setting through portable devices such as PDAs and smartphones.

WBLL: As the World Wide Web offers an inclusive catalogue of content, it also provides extensive materials to language teachers and learners. Web-based Language Learning (WBLL) refers to web-based resources to carry out the acquisition process or to engage learners with the course.

LMS: Learning Management System is a web-based course supervision environment where teachers and students exchange course materials or assignments online.

Traditional Language Teaching: This current study addresses to term as a conventional pedagogy that depicts outdated methods of drill exercises, memorized vocabulary, utilization of dictation by means of paper and pen, which harm joyful and effective classroom setting.

CHAPTER II: LITERATURE REVIEW

2.1. Introduction

This chapter mainly comprises two main divisions. The first sections begin with a brief summary of EFL, and its relationship with technology, it also contains a broad review on CALL including its history, the advantages of using CALL in language instruction, limitations of the method in teaching and the computer applications in the Turkish educational system. In the second section, one can find further and more practical understanding about web-based reflections of CALL and the benefits of game-playing in general.

2.2. English in the World Today

English is recognized as an international language among about 5,000 living languages, therefore it is selected to be widely taught as a second or foreign language across the world. As Alptekin (1984) defines; English is now a lingua franca of the twentieth century. Regardless of race, nationality or religious belief, it is an absolute requirement to acquire this global language for people who live in non-English speaking countries and seek to participate in the English-speaking world.

All eyes witnessed the rapid changes which have taken place since 1980s in the field of communication, information technologies, medicine and science, and no one can deny the contributions of western societies, mainly those of the U.S.', not only as creators of new inventions which transcend the borders of human imagination but also as the eponyms of every kind of supplies such as clothing designs, surgical instruments, eating habits, entertainment elements like TV series, movies or programs. As reported by Broughton, Brumfit, Pincas & Wilde (2002), while more than half of scientific literature is written in English, other languages spoken in underprivileged parts and developing countries have little provided new concepts, terms or discoveries to scientific extents.

Today English is a truly international medium of communication, and the dominance of this linguistic power was reinforced through political and economic factors imposed by economic imperialism through the growth of the British Empire and the United States with the emergence of the Industrial Revolution. There is no wonder many governments adopted English for several purposes, as it has become preeminent in the proceedings of most main international political meetings. More

than fifty years ago, American linguist Whorf warned us against the shaping color of language and says:

> "Western culture has made, through language, a provisional analysis of reality and, without correctives, holds resolutely to that analysis as final." (p. 244)

Since it was introduced to Africa, the Caribbean and South Asia through colonialism, the status of English in these areas has often been associated with social stratification and mixed feelings (Anchimbe, 2009). This led to the numerous independent states where English has existed as prevailing foreign language. Thus, it is certain that a number of world varieties of English exist. However, it is not limited to native or colonized people because of its expanding scope.

Due to the unprecedented interest in the topic of global English, uttered at both popular and academic levels, global validity of English demolished the paradigm of homogenization which results in the independence of its nationality-boundedness.

In his Three Circles model of World Englishes, Kachru provides a descriptive context for varieties of English worldwide (1985) (See *Figure 1*). Although it received considerable criticisms like the model fails to illuminate the heterogeneity and dynamics of English-using communities satisfactorily and it does not leave the door open to the mobility of countries from one circle to another (Park & Wee, 2009), Kachru gives a comprehensive account of the spread of English language across the globe by classifying it between inner, outer, and expanding circles of countries and focuses on the shifting distribution and functions of global linguistic market.

Kachru introduces the first circle in which English functions as the mother tongue and acquired by native speakers of the land through natural ways without any explicit instruction. The countries that belong to this category are the USA, the UK, New Zealand, Australia, and Canada. He proposes that immigration from British Isles to the North America and Australia plays a vital role of this extensive use of English as a main language (Kachru & Nelson, 1996).

On the contrary; the Outer Circle, including India, Singapore, Pakistan, Malaysia, Philippines and Nigeria, represents the institutionalized non-native varieties of regions which were colonized by the British Empire and still attribute English an administrative or partially administrative language. Even after decades of

decolonization, English retains its power as the mother tongue of many speakers and a cross-cultural influence on the local languages.

Lastly, the Expanding Circle countries (South Korea, Japan, China and Turkey) are the ones where English gains a priority in a country's foreign-language teaching policy chiefly because of its position as a lingua franca. People who reside in these countries are obliged to maintain the knowledge of this language for the integration into the globalized community and communicate with worlds of business and in the educational settings.

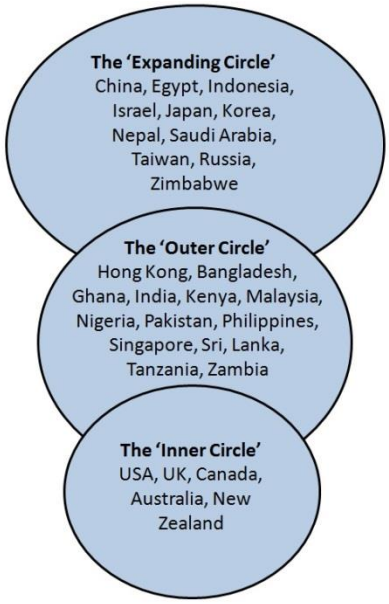

Figure 1. Kachru's Three Circles Model (1985)

Now English is thought to be a link forming between various different power territories and it has become increasingly standard in diverse contexts like political, artistic or educational settings. Hence, for any individual or community who desires to survive in this 'global village', needs to have this power and the prestige of linguistic fashion.

2.3. English as a Foreign Language (EFL)

The extrinsic reasons like inescapable advance of hegemonic powers and global flows from West to East escalated the impact of English as a primary method of human communication and compel majority of world population to internalize the necessity of teaching and learning this leading language.

Even though it dates back longer time ago, one can find the origins of English in history when Britain became the leading colonial nation in the 17th and 18th centuries when no country could challenge its uncontrollable economic and cultural globalization attempts and since then Anglo values coded in its language which are imposed by super powers have been seen as modernization (Kumaravadivelu, 2006).

The increasing influence of westernization enabled English to go beyond its natural borders especially after the World War II, which could be closely associated with the globalization of intellectual disciplines and systems of thought. From that point onwards, English by choice or force has penetrated into all societies by establishing its position as superior resource and indispensable vehicle of effective communication.

According to Jenkins (2000), the first traces of teaching English to the speakers of other languages dates back to the late 15th century. At the beginning, it was taught to replace the notion of native-speakerism and construct multiple identities. Yet, as regards to the relationship between its realm as an international language and its political, cultural and financial benefits, we should admit that learners of English as a foreign language have no choice of avoiding to employ bilingual proficiency.

Presently, after all conflicts and consequences, English as a foreign language, is studied rigorously and comprehensively more than ever, which has developed a worldwide ELT industry with different publications of textbooks, teacher training programs and potential customers. As it is frequently cited, in this post-modern era nonnative speakers of English outnumber native speakers (Crystal, 1997). Hereby, in addition to its commercial dimensions, now English instruction is compulsory and included in several universities and institutes' curriculum to satisfy individual's demands for various reasons.

2.3.1. The Role and Historical Background of EFL in Turkey

Because of political and economic reasons mentioned thus far, English is granted a special status by especially local governments to 'reach the level of contemporary civilization' through young population who have skills for modern work enterprise.

During the Ottoman Empire, the entire education policy relied upon the basis of traditional Islamic culture until The Tanzimat Period, which is the first large scale

westernization attempt in the second half of the nineteenth century (Küçükoğlu, 2013).

The history of foreign language teaching dates back to the years of instruction of Persian and Arabic but it was in 1773 when French was included in the curricula of military training institutions since it was the lingua franca of its era with its diplomatic and philosophical dimensions.

With the beginning of the 'Tanzimat Period' in 1839, the declaration of freedom and liberalism, Ottoman institutions' conservative political approach evolved into a serious commitment to understanding of modernization which brought a meaningful sense of a more advanced educational system according to the improvements of the West (Altundiş, 2006).

After a series of reforms which were fundamental in the context of reorganizing the status quo of customary language teaching, the establishment of Robert College in 1863, the first school to be opened that used English as the medium of instruction, appeared as a milestone in the history of English teaching in Turkey.

The Turkish Republic which rose from the ashes of the Ottoman Empire in 1923, led Turkey to turn its face from the East to the West in order to pave the way for economic and political relations with the outside world. To this end, many foreign scientists, including American philosopher and educational reformer John Dewey, undertook the duty of designing and consulting on education policies as a part of the civilization project (Saricoban, 2012).

After the Turkish Language Reform and the foundation of Turkish Language Association which accelerated the purification and standardization of Turkish language in national, social, cultural, and educational settings, the Arabic language lost its dominant intellectual force. Aiming to demolish all institutional bridges with the Empire, governments of the Republic itself advocated the use of other foreign languages and it was English as a result of the American effect which occurred implicitly through economic and social subsidies after the World War II.

According to the objectives of Turkish education system, it is intended to teach every student at least one foreign language. Hereby, the establishment of the English Department in 1944 at Gazi University to train language teachers was another milestone in the teaching and learning of English in Turkey.

Being aware of the opportunities pertaining to the integration with western countries during the postwar era like stability and the balance of power, the Turkish

state became a member of NATO in 1952. Three years later, the openings of the first state-funded English-medium secondary school, called Anadolu (Anatolian) school in 1955 and English-medium university, Middle Eastern Technical University in 1956 were major steps in the ELT field (Kırkgoz, 2005).

One of Demircan's (2001) studies indicates that in 1960s there were almost 1,300 English language teachers while now the number is estimated around 50,000 who work for the Ministry of National Education. The spread and rising status of English gave birth to 'Foreign Language Education and Teaching Act' in 1980 and 'The Higher Education Institution Law' in 1982, which made noteworthy adjustments in public education and foreign language teacher education policy including some administrative issues.

The new identity pursuit of the Turkish state and individual citizens throughout the last century gained speed after the end of the Cold War. The final years of the twentieth century witnessed a blast of overseas expansion in trade and technology which resulted in a form of language learning campaign. In response to nationwide need to learn English, English language became compulsory for young learners in Grades 4 and 5, and the ELT syllabus was revised in 1997 as required by 'The Ministry of National Education Development Project'.

Turkey's slow but still ongoing process of EU membership negotiations, has forced Turkey to adopt recent innovations in justice, human rights and education policies to meet the requests by the Union in 2000s. Besides the legal modifications, some major projects and educational programs were initiated for students such as Socrates and Erasmus, and various seminars, conferences and publications were given to language teachers whose duty is to raise students' criticism and self-criticism ability.

In the matter of foreign language teaching methods, although it not as fast as in many cultures, it can be defined as an evolutionary process from Grammar Translation Method (GTM), based on reading comprehensive and translations, to Communicative Approach, the emphasis of daily language. However, classrooms are still mainly constructed on a teacher-centered model and it is unlikely to help learners to internalize the fluency for an 'authentic' communication.

As a consequence of the recent economic developments in the last 10 years, more private schools and courses, which are equipped with multimedia, content-rich

textbooks and even native speaker teachers, were opened to serve a community which is in intensified need of learning English to catch up with the fast-growing world.

The contrast between the ideal education principles and real classroom practices is the most obvious dissatisfaction about the issue of English language education in Turkey. Despite a number of initiatives which has taken up by the Turkish government, more resources and efforts are needed to formulate a better communicative-oriented outlines for more qualified teachers.

2.4. Technology and Education

Even though it is somewhat hard to describe, education can be defined, in essence, as any act or experience that has a formative effect on the personality of an individual, which is synonymous with learning (Sampath, 1984). Despite the fact that it occurs from birth to death on an individual level, from one generation to another, school as a formal agency have been assumed the mission of conveying the cultural values and beliefs to the societies to modify their behavior.

Education is a lifelong process which is concerned with the improvement and adaptation, hereby characterizes a positive change to personal, social and professional extent. Various organizations whether governmental or religious, including family and non-profit foundations, are significant instruments and channels in the sense of stimulating planned change in the individual.

As for the dynamically developing term of ‘technology’, it does not allow any certain explanation that everyone agrees upon, yet it might be described as the application of expertise, techniques, systems and processes to produce goods or services or to reach some particular goals.

Today, the lives of human beings are under the influence of dazzling developments of sciences and communications with many other fields. While some rich countries enjoy the prosperity of this progress by fulfilling productivity, wealth and comfort via technology integrated education; most parts of the world are so deprived of technical knowledge, which breaks the bond between the rich and the poor in both the national and international context.

The gap between nations illustrates the adaptation ability of countries to the advent of Industrial Revolution in the late 1700s when all-embracing transformation from agricultural society to industrial society extended beyond physical strength in performing tasks with the aid of nonelectrical gadgetry (Thomas, 2014).

Direct reflection of scientific research and invention throughout the nineteenth century was the main determinant for industrialized nations to exist and go further. A great number of inventors, thinkers, scientists and some organizations carried out nonstop observation and experiments which made possible many technologies we use today.

Although various complicated technology is taken for granted in an age of computers and information technologies, the primitive state of educational technology has its roots in the 15th century when printing machine was invented. Thanks to its global reach and extensive resources, printed materials such as encyclopedias, pamphlets, dictionaries, literary works and textbooks particularly have been appreciated and accepted by different cultures since then.

After this striking achievement of printing in large quantities, literacy and dissemination of knowledge, which was once limited to just a few scholars, were democratized, thus mass education became a reality.

The inventor of modern-day textbook Comenius, created a design in which pictures and instructional texts were allocated wisely in his *Orbis sensualium picturs* (1658) that served as a basic school textbook for more than 200 years (Westbury, 1985).

Educational technology innovations have become so interdependent and indispensable that made us redefine their supporting role for the textbooks in classroom and imagine paperless schools, but the wide spread of mobile devices still fall behind printed materials which continue to stand as the most dependable implementer and core of the education systems.

Besides broad availability of educational print materials, Sheldon (1988) proposed one of the most remarkable approach to the dominance of textbooks by revealing a paradox, which is activities and content that are produced by teachers to meet the local demands generally perceived by students as less credible than a published textbook.

Due to the fact that textbooks draw the outline of what needs to be taught, and are the key factors that guarantee the teachers follow the curriculum, they are universally accepted among all institutions as part of national policy which reflects cultural and historical consciousness with supplementary material (Altbach, 1988).

Publishing is an old-fashioned but a major part of the educational systems across the world on account of its advantages mentioned above, but it is useful to

consider the drawbacks of the textbook market such as lack of interactivity, indigenization and adaptation. Despite new technologies has affected publishing considerably and made it an integral part of blended-learning, they are unable to overcome the barriers standing in front of the student-centered, personalized classrooms. While there have been some sincere efforts to incorporate local cultures and historical features into textbooks, it is an undeniable truth that most textbooks are created and imported by Western planners and publishers to the 'expanding circle countries'. For this reason, they are less adaptable than we hope, which stands out as the main limitation for learner autonomy.

As the Chinese proverb suggests, 'a picture is worth a thousand words', verbal lectures fail to satisfy learning needs in comparison with audio-visual powers accompanied the necessity to eliminate formal school limitations. With regard to the most beneficial technological developments, radio and television come just after mass publication as advanced educational technology which contributed to the field of intercultural communication and international network.

Although education is generally viewed as formal schooling, if it is regarded as every piece of massage which has positive impact on someone's knowledge, skill or attitude; then we must admit that broadcast technology is an effective means of forming receivers' environment for over a century.

Since the 1906's Christmas Eve when the first voice was heard via a radio broadcast, radio and television have been altering individual's lives at a fast pace through formal and informal educational applications including news, commercials, instructional programs allowing public a greater freedom to choose suitable content for their pleasure and needs.

As science and technology became a source of content, they became more popularized and these two media got more attention since they started to be viewed as educational agencies. Operated by government or non-profit organizations, radio stations transmit their messages consistent with the values that they desire to impose on public and sometimes these live broadcasts were videotaped, which are early pioneers of audiovisual materials, to be distributed to institutions.

Along with the worldwide broadcast television, closed-circuit television systems, which are local networks which afforded new chances for units who are in charge of producing instructive visual materials for schools, was a type of educational technology characterizes both technological and educational adjustment at that time.

While various enterprises were investing into the skillful use of communication instruments and practices which led to increased acceptance and awareness of new models, expectations for effectiveness and efficiency deepened which urged video recordings that removed dependency to any TV or radio program regarding time or place. In Meierhenry's (1966) work and in related references it was observed that education is seen as the outcome of teaching and learning settings of which primary objective is to bring about behavior changes in adaptive and creative individuals. In this regard, pupils gained the advantage and habit of selecting the desired subject-matter.

Tekinalp (2009) pointed out another aspect of mass media and global communication networks pertaining to education, and showed how this giant market has promoted entrepreneurial and scientific activity by not just functioning as a medium but also becoming the center of research with differing attitudes and paradigms from different fields like psychology, economics and sociology.

The emergence of computing in the late 1940s for calculating, organizing and storing information was the most effective forward leap towards many practices in our daily life today from manufacturing to transportation. In their paper, Edmunds et al. (2012) stress the fact that since nations wish to consume technology to develop their international trade, business and economics in order to remain competitive and relevant in the radically changed world after the World War II, they have always been in need of embracing the opportunities afforded by technology.

During the 1980s, the supremacy of technology was established when personal desktop computers made their first appearance and it has sustained its long-term pervasive and ubiquitous place at an increasing pace since then. Although it is impossible to compare first generation personal computers to the ones which are used now by anyone, anytime and anywhere; the introduction of this machine played an active role enriching individualism by making these devices relatively low-cost and accessible.

After computer hardware became micro in size, power consumption and weight; more amount of research was put into in order to reach the two main objectives of educational technologies both in private and public institutions, which are the upgrading of school performances through enrichment in traditional instructional materials and techniques, and the expansion of access to education of excluded segments of the population (Orivel, 1987).

Throughout this process, the interest to invest in the new sector, technology education, multiplied leading thousands of new computer-related publications and articles especially concerning with software and programming. Politicians and administrators, who desired to be seen modern, and develop their education systems to suit industries' needs, applied new approaches and courses to their curricula along with technology education at all levels, in primary schools, training centers, universities because of growing popularity of microcomputers.

One of the most favorable production of the operating systems is the successful introduction of storage technology which eliminates issues of time and space, enabling people to maximize importing and exporting any kind of informational resources. At the present time, more sophisticated portable hard drives and computers provide people the opportunity of keeping and carrying low-cost copies of expensive and large-scale voice, data, text and images.

Late 20th century witnessed the rise of globalization, which is outlined by Appadurai (2001) as 'flows of ideas, ideologies, people, goods, images, messages, technologies and techniques', and communication-oriented societies that have the capacity to embrace unmatched situations and to create new alternatives particularly among their young population. From 1960 when The U.S. Department of Defense Advanced Research Projects Agency launched an experimental network called ARPANET, which connects four universities, to the 1993 when the release of World Wide Web by The European Laboratory for Particle Physics in Switzerland (CERN), information and communications technologies (ICT) and globalization mutually evolved.

Thanks to communication applications operating on web which facilitates direct dissemination of knowledge such as chat, forums, blogs and other social networking sites, individuals have become free to put forth their own views without any oppression or manipulation, forming a new room for whole world citizens who are obliged to upgrade their compatibility and internalizing skills for political, cultural and educational transactions in technology-driven earth.

One of Malinina's (2014) previous studies indicates that, contrary to conventional education that emphasizes content; web-based learning, which opens up fresh opportunities in arranging educational environment and has positive influence on teaching because of its excellence in quick response, feedback and collaborative

qualities, adopts cognitive approach by involving learners who find themselves in meaningful contexts and need to take their own responsibility.

Competency of modern libraries and search engines like Google offer an advantage for students to reach electronic copies of resources having required information in their field at all educational levels via the web, which serves flexibility and equality among all participants whether they belong to developed or Third World nations.

One of the main roles that ICT supported education systems play is learning management system, which is a self-registration, instructor-led training software application operating on the web. The simple philosophy of LMS is to nurture networks of personalized academic culture to enhance and support classroom teaching and offering courses to a larger population of learners across the globe.

In recent years, several publications have appeared documenting LMS and in one of those studies Nunan (2010) describes that a good learning management system must allow teachers to carry out a needs analysis accord with the data from students and post supplementary materials such as handouts and additional informative sheets for students to download. Teachers can also administer a ubiquitous classroom in which they can assign students homework to grade and store all assessment documents including quizzes electronically.

Kozol's (2005) perspective which sees students as the best data source and more reliable in telling the truth of the schools than the others, implies another dimension that educational effectiveness of LMSs depend on, that is to involve students in their own education. While students' anonymous feedbacks can generate collective communication and a better relationship between two sides of instruction, constructive criticisms compose a negotiable groundwork which helps reflective teachers to step up their professional quality.

Long-distance e-learning, in which dissemination of knowledge occurs in a virtual space rather than a physical classroom, was confronted with skepticism in the beginning. However, the assimilation of laptops and mobile devices like Tablet PCs, Personal Digital Assistants (PDAs) and smartphones that are supported by online real time component, have managed to diffuse education beyond country borders.

As for the scope of ICT, different mobile technologies deserve close investigation on account of their feasibility and multimedia capabilities. Marinagi, Skourlas, & Belsis (2013) devote great effort to show how these ubiquitous computing

devices have been gaining importance in recent years and state that while portable and smart electronic machines were once used for just limited range and specific purposes such as making calls or serving as organizers, now new trends in handheld computers substitute pre-existing educational features or were added to them which allows students to communicate, entertain and engage in any educational context effortlessly.

Every passing day introduces a new alternative under the realm of innovation, closely related with the education, and e-readers, which has been used for reading electronic books written in e-ink technology, replacing hardcopy of printed materials. Aside from the recognized benefits like cost-effectiveness and flexibility, it increases the motivation of students struggling even in reading pleasure giving texts like novels or poems.

Within the framework of using technological aids in information transfer, smart boards and projectors occupy a quite important position in technology-based education. Today's smart schools, which have the capability of raising the efficacy during the learning process, allow better visualization, leading user interaction and participation. Various content-rich videos are available that suit any learner's age, interests, intelligence types and cognitive skills, which spare teachers' time and effort to design daily lesson plan.

Technology is also in the center of constructing and performing online testing services like TOEFL and IELTS which are carried out internationally, and provide a practical contribution to the large-scale assessment in a shorter time. Moreover, according to first-hand data gathered from an experimental survey by Dermo (2009) students who participate in online assessment perceive the system favorable in terms of reliability, security, validity, and accessibility.

The examples which are mentioned in this study so far have referred to instructional cases where the traditional classroom is enhanced, fully integrated by technology, or technology delivers the content with user-friendly tools. Yet, computers are still used extensively as a part of infrastructure system of institutions for administrative purposes including keeping archives, planning budgets, assigning students to classes and teachers to schools, evaluating students, recording students' progress (Zhuang & Thomas, 1987).

No one wishes to deny arguments about technological solutions' drawbacks. It is clear that this hot topic still requires further inquiry in particular for its cognitive and pedagogic value. However, besides its advantages in contrast with technology-

deprived settings, increasing needs and expectations of students compel institutions to incur expenditures on information and communication equipment in order to produce high caliber human outputs who will shape the future of mankind in the globalized order.

2.4.1. Historical Development of Educational Technology in Turkey

Technological potential of a country is a driving influence on its development as a regional and global power. To make the best use of technology differs countries from each other in stepping up the process of industrialization and being a candidate for a leadership in every competitive market. Thereby, it is unlikely that Turkey, a candidate for the membership of European Union (EU), would remain unresponsive to the demands about support programs and investment into technology and education which are encouraging stimuli on employment and growth of any country.

The preliminary implementations of computer aided teaching emerged in 1960s especially in the universities of the U.S. and some other developed countries like Britain, France and Germany. Nevertheless, Turkey had to wait as late as 1984 when Computer-Aided Education (CAE) Project was initiated by state and 1,100 computers were sent to schools in an attempt to enhance teachers' basic computer skills and constitute awareness of technology. Meanwhile, curriculum developers included computer courses with elective status in secondary schools, which was mainly based on some applications of DOS (Disk Operating System), word processing, database, BASIC and PASCAL programming languages.

The employment of modern technology in teaching has been considered as a rescuer in less-developed or developing countries. What is obvious is that absorbing and using its advantages is one of the major duties of educational systems and its planners if they do not want to be left behind in the digital century. To this end, General Directorate of Computer Education and Services (BILGEM) was established by the Ministry of Education in 1992, to integrate and deliver computers to any formal school throughout the country and promote staff's Computer Aided Instruction (CAI) skills, knowledge and attitudes.

To be able to fit ICT in instruction practice, the teachers need to feel confident themselves in technology rich environment and increase their computer literacy. In the 1990s, many education faculties structured courses into pre-service teacher training curriculum to train graduates and make them familiar with computers in education.

However, the results obtained by Özar and Aşkar (1997) from fifteen interviews with key policy makers in the Ministry of National Education (MONE) suggest that the lack of adequate physical condition in schools and classrooms, inexperienced teachers in ICT, lack of expertise and software for subject teaching, and above all the present structure of the hierarchical, bureaucratic, centralized MONE, which undermines the flexibility, caused failure of projects until then.

In line with the global circulation of intensive technologies, comprehensive educational investment projects were put it into practice with the financial support of the World Bank by the Ministry to reach the standard level of information and communication societies in 2000s. In order to foster and diffuse education to rural areas, computer labs and printers were established and internet connection was provided at schools, from which local residents could benefit as well. Under the responsibility of The Department of Information Technology in Education (EBIT), directors, school administrators, computer coordinators, and teachers were equipped with up-to-date training programs during implementation of these projects.

While approaches based on constructivist and multiple intelligences, in which learning and teaching are accomplished via students' their own knowledge through performance and task-based procedures, were introduced to the Turkish education system in 2005, Turkey's Information Society Transformation Policy adopted by the e-Transformation Turkey Executive Board, consisting of all related parties of public and private sector and the NGO representatives (Akman, Yazici, Mishra & Arifoglu, 2005). The ultimate goal of the action plan is to attain sustainable growth and competitiveness against technologically advanced countries by increasing human resource competencies and employment, and eliminating digital divide (SPO, 2006).

Turkey's young population makes it an imperative for government to provide long-term structural reforms based on ICT sector under the macroeconomic projections. In this context, MONE launched a project in 2010 called FATIH, which is an acronym for Fırsatları Artırma ve Teknolojiyi İyileştirme Hareketi, or Movement to Increase Opportunities and Improve Technology.

Like Fatih Sultan Mehmet, who is the conqueror of Istanbul, it was targeted to open new era in the field of ICT. Within this framework of 5-year project, interactive whiteboards, projectors and internet network infrastructure were intended to be distributed to 620,000 classes in 40,000 pre-school, primary and secondary-level

schools (MEB, 2015). In addition to the aforementioned products and services, election promise of ‘one tablet per child’, which is given by prime minister at the time, was aimed to be realized to increase computer ownership.

Paraskeva, Bouta & Papagianni (2008) suggest that school teachers’ altering power of self-efficacy can affect success or failure of certain objectives and expected outcomes. Hence, two modules of training were tailored for 680,000 teachers, which enables them to dispel their negative attitudes and disbeliefs.

According to the feedback from different stakeholders, especially teachers and students, decision makers do not comprehend technology to be a facilitator of broader strategies and curriculum with student engagement activities. In a report on FATIH project by Pouezevara, Dinçer, Kipp & Sarışık (2013) it is pointed out that even though it is hard to define and measure the relationship between technology and student motivation, content development regarding the effective use of modern technologies can bring benefit such as better attendance and improved behavior of students.

The most marginal advancement in ICT in the history of republic has attracted much attention from research teams in recent years, who ask whether the project has achieved the expected instructional and technological objectives. In one of those studies Aşkar et al. (2016) observed that both students and teachers believe that there is a decrease in several areas including understanding the course, attention span to the course, interaction with others, speed of learning or liking the school. Based on the data gathered from 9th grade students and their teachers, it seems that both parties need to foster positive emotional and academic attitudes towards technology, and more time should be devoted to designing activities related to attention and engagement.

Through lifelong learning and knowledge society, ministries of education endeavor to create a citizen model who uses the information in all areas of life so as to ensure continuation in evolvement both in state and individual level. FATIH project, has been taking an important part in increasing the chances of economically disadvantaged people to have equal opportunity towards personal and professional development. However, in their qualitative study exploring students’, teachers’, and administrators’ first-hand experiences on using tablet PCs, Altun & Ilgaz (2016) found out that majority of participants have been complaining about infrastructure problems mainly due to lack of adequate guidelines and pedagogical solutions in different

subjects. On the other hand, all shareholders hold positive belief towards these novelties more or less, yet they need more in-service training trigger and accelerate in expanding the expected outcomes.

Doğan, Çınar & Seferoğlu (2016) carried out a comparative analysis and revealed some points that are considered to be shortcomings of the project. Indeed, they admit that the investigated countries also encountered similar difficulties like inadequacy of teacher training and electronic course contents. They also highlight another characteristic that can affect the success of the project, which is the discontinuity of the projects because of the unplanned investments.

It is also worth mentioning that the presence of parents adds high value in the collaboration among shareholders to reduce risks that jeopardize execution of the process. Since they are not native digital learners, they should be informed to adopt favorable philosophy, and exist as a pressure group who reinforce administrators to exploit the project mechanisms. Besides, some characteristics of the system make it well suited for open and transparent relationship between parents and children, like supervising attendance status and performance of students over the internet anytime they want (Altinay, Z., Yikici, Debes, Deviren & Altinay, F., 2016).

Another dimension of IT and education cooperation is 'technoparks', where technology production takes place in close connection with universities, research institutions and industrial organizations. Despite different application forms depending on science and industry policies in various countries, it is commonly accepted that technoparks serve as joint utilization for employee and employers who desire to penetrate into foreign markets by widening their impact horizons. While first models were formed in the U.S. in 1952, the first technology bases were founded in Turkey during late 1980s, with primary priority in the field of renewable energy sources, biotechnology and satellite technology (Tepe & Zaim, 2016).

As education and income levels rise in a country, so does the demand of a nation for more infrastructural resources, and the ICT becomes a pivotal point accompanying successful integration of a deep change. Unless existing and upcoming problems are detected, certainly a smooth transition from an archaic to modern society cannot be possible. Firstly, more independent researches encompassing not only major projects but whole field should be encouraged to ensure detailed and objective feedback. Scholars may expand the limited amount of data available to draw conclusions and offer recommendations based on the empirical results about

beginning, operation and continuation stages. Yet, when observing the results reported on current projects and policies regarding ICT, it becomes clear that as long as governments employ a holistic strategy and review cross-country analyses on prior cases, accomplishment of the system can be guaranteed.

One of meaningful limitations for the success is the 'digital divide', which is still a wide gap and needs to be filled through computer literacy trainings that is offered by Ministry of Education, NGOs and universities. Improved infrastructure and driving internet service prices down for personal users may take part in the solution of this problem.

From the research that has been undertaken by Örnek & Danyal (2015), it can be concluded that the knowledge and capital must be brought into action to seize entrepreneurial spirit of citizens for technology-intensive areas by TUBITAK (the Scientific and Technical Research Council of Turkey), other governmental entities and private businesses.

Lastly, in light of the lessons learned from previous experiences, it is necessary to mention that as long as we minimize inequality of opportunity for the economically, physically or demographically underprivileged populations, the promising efforts to achieve intended change in education and society will be successful.

2.5. Computer Assisted Language Learning (CALL)

The technology use exploded after the increased bandwidth became available to the general public, which brought sociocultural, educational, and technological challenges as well. In contrast to past notions, which emphasize the traditional basic skills, the manifestations of technological movements have influenced the beliefs and values of humankind, who find themselves in smart environments. The outcomes of a contemporary study showed that for educators, students, workers and graduates of Generation Z to manage their own learning and career in a futuristic philosophy they have to be able to think deeply and logically as well as be creative and productive users of technology (Keane, T., Keane, W. F., & Blicblau, 2016).

Moreover, in their study, Ilomäki, Paavola, Lakkala & Kantosalo, (2016) aim to give a broad account of 'digital competence', which is an evolving, far-reaching concept that requires digital and media familiarity as well as e-skills applied as a remedy for all members of a community. As new mainstream trends appear, all

domains in society must be quick in adapting into their professional and personal sceneries in order to keep themselves competitive in privatized sectors.

The neo-liberal paradigm entails individualization and customization in local society whereas paradoxically obliged policies rely on global information-grounded measurements while modifying purpose, functions, or delivery all kinds of civil services just because they acknowledge digital literacy as a priority. Therefore, recognizing the important role of tech-savvy citizens, educational aims are being reshaped and, political and financial commitment has been largely placed on offering a secure and free technical infrastructure, based on the assumption that the substitution of lower level of technology with the new ones will eventually help in manufacturing internationalized graduates (Yemini & Cohen, 2016).

In this same regard, Puentedura (2011) examined the stages of the technology integration and suggested a framework with four levels, which are substitution, augmentation, modification and redefinition. Under the substitution dimension of SAMR Model, technology simply replaces a learning activity without any functional change as in the example of using electronic dictionaries in smart phones to look up the unknown vocabulary. At the second level, augmentation is a process where new intervention does not just provide a replacement but also offers some functional improvements like using mobile phones for the same purpose but with different pronunciations or sentence examples. Since these two aspects remain under the sophisticated level with little satisfactory learning skills development, they rank on the enhancement stage.

Building upon the transformative stage, modification level allows to redesign the given task. During redefinition, the final level, extends the outline and invites the user to produce more fruitful and creative work. For instance, students can shoot a video with their smartphones instead of writing down an autobiography or even they can only create a social media account and reflect it to the board via projectors. The last section of the model may actually be a chance to transform students' potentials and construct 'thinking out of the box' skill.

Another phase and face of the globalization is the universal language and the current fact that English is used exclusively as the medium of communication and instruction in every corner of the world also propelled government and non-government agencies to focus on intensive English language teaching. Thanks to the availability of choice along with the social and technological advancements, a vast

majority of public has access to global network; hereby English is no longer under the territory of small elite legacy.

A growing body of literature reflects the extent and scope of the transformation of language teaching in which entirely traditional schooling alternated with powerful forces of technological standards. As Chen et al. (2016) propose the way people obtain knowledge has shifted from formal chalk and blackboard school agencies to informal channels.

Techno-pedagogical knowledge and ICT practitioner skills are fueling content delivery with just necessary combination of guidance or learning suggestions which are now inevitable for the survival of formal education. The changes that affect educational landscape like cyber learning or social learning contain context-awareness behaviors that provide real-time assistance compatible with each individual's learning profile.

At this point, Computer Assisted Language Learning (CALL) steps in either subsidiary or alternative to customary interpretation. However, it is difficult to locate CALL in a limited area as it requires a cautious weighing of interdependent categories, like materials design, technologies, pedagogical theories and modes of instruction. Yet, it is still worth trying to provide a definition, which is adoption of existing technologies to introduce a remedy for a better understanding of any language and periphery issues.

Because of the changes in technology and multimedia in particular, based on hardware and software, methodologies and learning strategies of CALL are dynamic and regularly revised. The amorphous or unstructured nature of the discipline is reengineered to embrace a broad spectrum of entirely unpredictable teaching and learning angles.

In a CALL environment, courseware including audio, video, and image with hypermedia features connect every variable to another, allowing convergent and divergent thinking through the ability to visualize ideas. In contrast to conventional numeracy and literacy skills, which still remain fundamental for success in all learning areas, the incremental CALL examples opening up new ways to shared imaginations which is convincing power for cultivating higher order skills.

Although it is difficult to interpret the constructed nature of popular CALL culture and to investigate this ever-changing discipline, research is still at the heart of the approach. More importantly, both educational technology producers and

consumers need to be aware of the influence of procedures in sensitive terms such as ethics and safety.

2.5.1. Development of Computer Assisted Language Learning

Although there are now plentiful different ICT practices that can be used to cover more material in a shorter time, the first phase of modern educational methodology was CAI (Computer Assisted Instruction) and CBI (Computer Based Instruction), which dates back to 1950s, when only room-sized computers were available at university campus research laboratories. Due to particular organizational problems like prohibitive cost and immobility of machines, the access and exploitation of these archetypes for teaching and learning was limited.

Research in the field of CALL reveals that the long and well-established tradition of language instruction through computers appears for the first time in 1960s, which focuses on Skinner's theory of operant conditioning and programmed learning. Teaching principals of introductory phase of CALL were strictly linear and isolated, oblige pupils to trail small steps of learning package regardless of their learning styles and pace.

Warschauer, Shetzer & Meloni (2000) reported that contrary to 1990s, when the field connects research in various domains and become interdisciplinary, during 1970s it was relatively narrow and predominantly addressed to a small group of educators who began to experiment their own modest applications.

During the period in discussion, the efforts to type international fonts and drill morphology brought results of the avant-garde tutorial programs based on the Grammar Translation method, which was the dominating Second-Language Acquisition approach since 1840s. The issue of translation was at the heart of The Programmed Logic for Automated Teaching Operation (PLATO) developed by University of Illinois, which aimed at teaching Russian especially by means of scientific documents. Blake (2013) referred to the system as a course of 16 lessons requiring 70 hours to complete, with a wide range of computer language activities dealing with vocabulary drills, grammar with relevant explanations and translation tests. This new platform also encompassed remedial feedback with error checkers providing benefits of privacy and individualization to each student, thus, it was employed by many other disciplines within the social sciences.

Some other noticeable projects were initiated under the CALL umbrella that engendered encouragement and had almost the same strengths and weaknesses of

PLATO. Among the significant university-based researches on improving language teaching, Stanford Project was developed in Slavic Languages Department of the same university to teach Russian using cumulative investment of practice along with language laboratory exercises. In the meantime, Dartmouth College and the University of Essex also dealt with Russian language instruction which was mainly designed with fill-ins and was deprived of communicative competence notions.

When professionals working in CALL realized that passive methods of teaching fall short, which are a mere collection of unnatural and artificial units in textbooks, they created nonlinear programs hosting multimedia content. One of those exemplary CALL gadgets is videodisc, which exceeded behaviorist learning models owing to its self-directed features enabling access to richer content and better manual control options. The audiovisual ingredients of videodiscs such as videos and images managed to stir and intrigue interest among the students as against text-based exercises, therefore it could present a better understanding.

Thanks to large storage capacity for multimedia, videodisc made electronic textual navigation possible, and the first footsteps of videodisc programs in 1980s, *Macario, Montevidisco and Interactive Dígame* were capable of communicative interchange in its liberal use of natural environment. Brigham Young University produced these video-based, interactive type platforms in an attempt to involve students in the target language, which is Spanish in this case.

Built on non-educational, Mexican movie *Macario,* the 90-minute video focuses on authentic, contextualized annotations and questions with the help of facilitator function of a teacher. Similarly, *Montevidisco and Interactive Dígame* simulate adventures in a Spanish-speaking country, where users continually confront people who speak to them in Spanish and make choices out of pre-set responses in real-life situations. Despite the limitations such as difficulties in scripting interactive video or keeping track of all of the possibilities, the distinctive features of the programs like flexibility and connectivity allow the learners to control over the medium while keeping their interest alive (Gale, 1983).

Some chatterbot computer programs such as *Eliza* and *Lucy,* software for simulating human speech, were established on the idea of natural language communication between man and machine, hence, designed to emulate an empathic listener. Although these intelligent tutoring situations were far away from high degree of discourse competence, they amused students for some time by locating key phrases

in user responses and mimicking follow-up questions from their database in reaction to these.

While microcomputers increased in number by the mid-1980s, the surge of interest in recognizing their potential as a tool echoed in corporate and university research laboratories that devoted fund and time to explore the role of computers in language teaching (Hubbard, 1992). Among these passionate efforts, an ambitious umbrella project, The Athena Language-Learning Project (ALLP), named after the Greek goddess of wisdom, was carried out by a group of researchers at Massachusetts Institute of Technology (MIT) to involve parsing techniques and speech recognition into task based format of instruction (Pennington & Stevens, 1992). The five-year old, well-funded educational experiment produced three exceptional sub-projects, *À la rencontre de Phillippe, Dans le Quartier Saint-Gervais,* and *No Recuerdo,* which feature relatively constructivist aspects as multiple scenarios enable the learner to take action with possible consequences that spark the intrinsic motivation where user reconstruct a micro world on conversations in a foreign language.

In a period when mainframe computers gave way to commercial, personal microcomputers progressively, multitasking character of a new operating system developed by Apple, made possible the most responsive and playful authoring tool for various learning styles to produce immense quantities of multimedia materials. 'HyperCard', which was introduced to the market along with the Macintosh, a new style of computer, deployed the functional principles that the Web serves today in terms of openness and simplicity which allowed teachers and learners easily develop their own CALL materials as it embodied new concepts like 'hypertext' and 'hypermedia'.

Hypertext structure refers to a navigational activity on which text is constructed as a cognitive map where participants follow contextual cues that are underlined blue type or highlighted and guide the reader to the referent (Li, Tseng & Chen, 2016). According to Abdi (2013) who examined the effect of using hypertext materials on reading comprehension ability of EFL learners, nodes or chunks of information that are linked together provide a fluid order of arrangement that transform a written piece to unstable and unpredictable work which engages the reader his/her own reading process and make them authors in their own right.

Likewise, hypermedia is a pedagogical perspective that facilitates a principle focus on simply linking infinite source of media in order to create a dynamic sense of

the information under favor of sound, images, animation and/or video. Hémard (2006) gives insights why this multi-layered text management format caught the attention of developers by demonstrating that unlike rigid interaction at the root of the behaviorist school, hypermedia interfaces contextualize language learning, relying on students' own accountability and responsibility in their satisfactory manipulation that builds rapport on cultural and academic bases.

It is helpful to consider the background where the computerization in language teaching expanded by leaps and bounds in 1990s when the competence of computers at the time was far less than it is today, though. Needless to say, until then teachers who were resource person had absolute control over technology which predominantly delivered only in the class (Stockwell, 2013). However, especially after the internet's appearance around mid-1990s, international commercial providers of software customized different packages and templates along with more sophisticated multimedia capabilities which capture listening comprehension proficiency.

Universal access to do-it-yourself programs added fuel to opportunistic learning at which learners choose different paths and solutions fitting their needs in micro-learning opportunities. A promising shortcut to language learning, CD-ROMs, were soon to be replaced by the larger volume media DVD, storing a diverse collection of data such as dialogs, stories, dictionaries and authentic seminars, replaced the old cassettes and relatively large videodiscs within just a few years. Although they carry some risks like not reflecting the natural setting and spoken language of the target, it helped to broaden knowledge transfer that took place in every direction thanks to distributed systems which has been a flourished and evolved growth area since then.

The term that has been often used since the beginning of the 21st century is 'Web', which particularly its second generation refers to as a network-based communication of which de facto official language is English. The paper written by Newman, Chang, Walters & Wills (2016) to explore the extent of the ecosystem that modern Web companies represent focuses on 'the social web' which equips people with services that link them not only with their acquaintances but also with events, interest groups, companies and other bodies through a persona or profile.

Interpersonal networks from humbler technologies like blogs and wikis to more sophisticated ones such as *Facebook* are associated with communicative efforts

which people of all ages and backgrounds use the common target language for negotiation of meaning, thereby developing semantic proficiency without noticing. Conclusively, computer-mediated communication (CMC) in different forms like real-time chat or bulletin board systems facilitating linguistic acquisition is guaranteeing both digital and literary usable skills required to be a member in international virtual community. There is a growing awareness that internet users and young adult learners prefer communication through the medium of lively conversations instead of written text mode, which *Skype* offers and increases the quantity of oral production between native and non-native speakers.

There is also an explosion of streaming audio and video in particular, which is supported by transcripts or subtitles in any language that elicit pleasure with the ease of use. Large masses upload, share, and view videos on online sharing sites like *Youtube*, which foster participation free from anxiety on account of anonymity by which users hide their real identities and overcome their fear to be embarrassed in front of others while they are before the eyes of whole world ironically. Within this context, accessing to popular TV series and movies in variety of video formats with high quality display features engaging both hemispheres of the brain that relate to different processes of dialogue, plot, visual images are now fairly cheap or even free of charge (Berk, 2009).

For the purpose of natural input, multi-user virtual environments (MUVE) encapsulate alternative territories like *Second Life* that reinforce introvert users to construct on-screen character as avatars and converse with others under circumstances that would not be possible in real life. A recent study states that embedded activities in these games feature challenges and tasks as well as competitiveness and playfulness which let students vigorously explore the world, draw evidence-based conclusions, and forecast consequences with various degrees of the subjective impression of immersion through multiple perspectives (Cheng, Lin & She, 2015).

Equally important agility that the web provides as a way of modern learning is not in the classroom, but across vast distances with both asynchronous and synchronous interaction. Without a doubt, in addition to the quality elements such as cost/benefit and portability in less delivery time; these hybrid or entirely online learning formats have become attractive because of their diminishing effect on social and non-verbal signs or geographical isolation in high-poverty districts (Gollin-Kies, Hall & Moore, 2015).

Academic work in digital media dealing with language and technology that seeks research and development led to the foundation of the two primary organizations, Computer Assisted Language Instruction Consortium (CALICO) in the USA and European Association for Computer-Assisted Language Learning (EUROCALL) in Europe. Both worldwide associations started as a humble endeavor of a group of enthusiastic people who devoted themselves to create new technological paradigms for second/foreign language education, and now support professionals all over the world with articles, conferences and journals.

2.5.2. Computer Assisted Language Learning in Turkey

Since enhancing education quality has been the main concern for developing countries because of the potential role of human capital in improving welfare via a set of different areas such as health, agriculture, and even reducing fertility rates, development policymakers, economists and researchers regard this issue as a priority (Masino & Niño-Zarazúa, 2016).

Despite the incredible progress in statistics on the percentage of children who have enrolled in a particular level of school in low-income countries, in their article Glewwe & Kremer (2006) point out some common problems such as, insufficient per-pupil expenditures, lack of basic equipment and school supplies, low pupil-teacher ratios, unrealistic curriculum designs remain as the endemic obstacles for training students as well as their counterparts in developed countries.

Although educational problems in developing countries differ from country to country, one fundamental challenge is that they are deprived of cheap and fast ways to generate and transmit knowledge. The potential link between emergent future visions and modern workforce illustrates the need for effective measures to cultivate participatory culture which has broader skills to explore new ideas and concepts.

Education, foreign language education in particular, and technology have been viewed as a permanent solution to become an industrially developed country, as local communities can attain ample opportunities to participate high value-added production processes.

In this sense, Turkey, the member of this cluster suffering from similar issues for a long time, has been deploying top-down educational reforms concerning increasing computer and internet penetration rates, hiring extra teachers and allocation of monetary incentives to recognize the role of technology-intensive instruction which

will produce convergence of communities both at home and in the world with the help of English, which is the language of integration.

Besides the measurements mentioned in this study that were taken by governments to use technology for any kind of instruction and foster English language teaching, the first breakthrough that brings computer with language teaching was adjusting computerized laboratory systems where students visited once or twice a week to get auditory and visual referents that rely on a deductive approach of drills applying grammatical rules rather than the active self-access centers.

The fact that various countries decided to use educational tools dedicated to quality and integrity, made Turkey become more conscious of taking major steps to adopt native speaker models to escalate the students' fluency in English. To this end, Turkey chose a curricula-based interactive software aiming at a range of ages and proficiency levels with graphics, animation, video, and speech-recognition components (Brown, Campbell & Weatherford, 2008). *The DynEd Multimedia Courseware*, which stands for Dynamic Education, founded by linguists, computer programmers, neurologists and a team of engineers on the purpose of switching from the understanding skill to automation state during permanent settlement of the English language.

The well-sequenced intuitive program opens with a placement test which includes increasingly advanced questions to determine the first-time users' proficiency level and appropriate educational software accordingly. Delivered to schools in 2007 by MONE, this listening-speaking-based multimedia course monitors students' work and behavior step by step to differing degrees which provides tables and reports about their progress individually or as a class (Döngel, 2011).

It is certain that no artificial intelligence is capable of teaching any material without human intervention, thus a blended model where self-study activities and classroom interaction complement each other is a key issue in this project. Educators can examine bountiful assessment information stored in 'Records Manager' section, including even microphone and headphone use, to establish a physical presence.

Within educational technology journey of Turkey, reviewed literature shows that there is a discrepancy between the expected outcomes and actual results, which requires more human interest than technical. There is no question that school principals and teachers are basic components to get a sustainable and widespread reform up and running for creating conditions that influence a society for the better.

2.5.3. Types of CALL

The relationship between language and technology can be studied by dealing with its rapid development and mutual attachment to methodological approaches, which was seen as a gradual period of transition from grammar-translation to global paradigm in language education through task-based teaching. In broad terms, as Warschauer suggests (1996), CALL understandings and implementations over time can be classified into three following phases: behavioristic, communicative, and integrative.

2.5.3.1. Behavioristic CALL

Within the era of Second-Language Acquisition (SLA), B.F. Skinner's psychological approach of behaviorism was much popular in 1960s, which has its origins in Ivan Pavlov's ideas on human behavior based on stimuli and responses relationship to modify behavior that is renowned for the experiments at which dogs show conditioned reflex by salivating.

The key assumption underlying Skinner's theory of operant conditioning is that learners might be likely to be reinforced through rewards for overcoming increasingly difficult steps on the way of strict objectives (Karaman, Özen & Yıldırım, 2010). Drawing inspiration from this approach, programmed instruction or programmed learning is tailored for learners to get positive feedback on condition that they show required behavior, or renew process in an opposite situation.

Many practical applications of programmed instruction dominated structural CALL practices in the early days of language education through technology by means of repetitive language drills, explicit grammar instruction and translation exercises. Although the primitive use of computers was restricted to multiple choice exercises or matching activities, it was widely appreciated because it offered students the opportunity of studying individually and proceeding at their own pace.

Entitled as the first phase of CALL, structural computer aided instruction attempted to modify behavior like any other teaching approach or method. However, this earlier stage of the field just reflected traditional perceptions and merely adopted conventional textbook based courses which confirms the significance of methodology rather than tools.

2.5.3.2. Communicative CALL

One of the notable advantages of setting up a computer based language course lie in ease of exposure to dynamism of a language, which is commonly

witnessed that behaviorist ideas and practices failed to engage learners, and displace the notion of a static textbook. As linguists' inquiries welcomed student as an actor who forms his own learning, CALL professionals have needed to suggest and support SLA theories and models with electronically based platforms and tools accordingly.

A study by Sarfraz, Mansoor & Tariq (2015) that points out the unsatisfactory situation of English education in Pakistan and focuses on variation in the perceptions of the teachers and students about usefulness of activities to survive in an environment where regular class meetings are severely lacking suggests that identifying the priorities and designing related content still remain as a challenge to build communicative awareness with less focus on form during hybrid courses.

In this respect, the student survey that is analyzed by Sokolova, Golovacheva & Chernaya (2015) shows that learning objectives should vary depending on the context and needs where students' level of erudition may rise through material interaction which is initiated, repeated or completed by them with meaningful feedback to support the thinking process.

Although the initial findings were promising for developing and assessing learning experiences, basic variety of technological components of exercises that is applied in this level is neglecting productive factors which are crucial for fruitful CALL, and more suitable to reinforce receptive listening and reading comprehension skills, thus falls behind to excavate this rich gold mine in terms of collaboration and dialogue, necessary to improve reflection and critical analysis skills.

2.5.3.3. Integrative CALL

This last category of CALL is defined from different points of view based on the combination of multiple language skills or/and activities that are grounded in interactionist notions in which different communicative resources such as texts, graphics, sound, animation and video are linked together with full use of networked computers to involve learners in collaborative teaching and learning processes (Evans, 2009).

Around the turn of the century, more computer-connected changes that have occurred under the Web 2.0 which made it possible for us to send every kind of data simultaneously through interactive personal tools, which abolished the limited responsiveness of the so-called interactive commercial software. Understandably, the field expanded to include Computer Mediated Communication (CMC) providing learners with an opportunity to practice with strangers from any country reducing

logistical and psychological difficulties. In addition to this affordance, students recognized the value of the hard work in class and reflected what they learn into real life owing to such new forms of communications that led to the birth of global understanding.

Even though there have been various views that appear for and against the use of CMC in intergroup contact, internet-based communication might even aid to lessen conflicts and stress among different sectors more successfully than face-to-face contact where English can be effectively utilized (Walther, Hoter, Ganayem & Shonfeld, 2015). It is possible to connect multicultural virtual groups from the comfort of their own locales over long-distance broadband networks in a life-size classroom.

Intelligent CALL with its program and activities offers a realistic solution to students' interests as well as their developmental stage to pave an educational path on which a stable discovery process occurs. Not surprisingly, learner syllabi are the most fundamental of building learner's confidence in facing unpredictable challenges in non-native situations by means of exploiting culturally authentic sites, commercial web pages or mobile phone applications.

Nevertheless, it may be fair to say that to lay whole responsibility on any agency, either theoretical or practical, to meet requirements of embracing experiential and formal knowledge, could be a mistake. To achieve increased impact on learners or system, individualized structure of present states must be subsidized with traditional pre- and post-activities and techniques for helping students construct meaning to be part of continuum of innovation.

2.5.4. Limitations of CALL

A number of favorable circumstances have been cited to identify the benefits of computer-based systems which generate a powerful sense of highlighting contemporary practices and advancing educational programs' reestablishment that are blended with pedagogic programs. However, in reviewing the current state of CALL evolution, new mechanical, instrumental, and academic improvements which drastically have changed the standards of education quality also revealed the failure of such systems in terms of humanistic, communicative, and constructivist approaches.

Regardless of the consistently upgrading and progressing educational aids that create harmony amongst educators and learners, a popular view expressed by a significant number of scholars points out that numerous educators are not aware of the

pace and vision of communication channels that broaden learning range and possibilities (Watty, McKay & Ngo, 2016). Drawing on the findings from different researches, instead of appearing as directive function, instructors remain scholastic, and ignore requesting students who have advanced technology aptitudes.

Undoubtedly, one of the fundamental reasons that teachers show resistance to embrace these new technologies roots in the fear of losing the role as an irreplaceable variable in educational growth where they sustain some privileges of evaluating and monitoring every step of the mechanism which has started to drift away from face-to-face teacher centered instruction to excessive individualization of learning.

In this regard, the gap in technical expertise between academic staff and technology-savvy students brings the incompetence of trainers into the light, which may generate negative attitude towards CALL applications, and defines students' motivation that is penalized.

Teachers' domination and inadequacy are accompanied by other inhibitors, such as administrators and parents who are doomed to live in a post-industrial purgatory. Without belonging to any side of digital divide, they both insist on advocating common misconceptions, reasoning safety issues or accusing machines of having artificial feelings and brain.

In Hashemi and Aziznezhad's study (2011) that is examining the power relations between human beings and computers in educational settings, they draw operators' attention to empower cooperative social skills of students which prevent them from becoming slaves of the hand-made electronic creatures.

A great deal of descriptive researches within the literature manifest that not surprisingly there is no enough financial support that is required, despite the effort and budget which have been allocated to acquisition of computers, software and other essential materials, but not to human resources, which is indispensable as well. Since the progressive diffusion of quality education is the keystone of raising the income per capita, thus the absence of faith in consuming technology puts information production in danger which in the end leads to the long run economic and social downfall of a nation in development and growth (Saviotti & Pyka, 2016).

Even in technology-intensive environments, several distractions exist, which reduces the gains of investments dramatically. While the nature of internet and mobile technologies indeed possess versatile and flexible features, they also have technical complications, such as copyright issues and viruses that must be taken into

consideration seriously to protect the labor of creators of any digital work and users especially at young ages.

One of the other challenges is disinformation that constitutes a type of thought infection which is frequently a method for criticizing the insight and integrity of another culture, belief or political view. Although individuals have learnt not to believe all they see, redistribution of these falsehoods or urban legends continue to dishonor different groups and diminish the hopes for a peaceful living at home and in the world.

If truth be told, security issues and risk factors, pornography and abuse in particular, related to web-based cases are more in number than closed network systems, which turn off and concern parents. In just the same way as all other materials designed by teachers, these activities may be manipulated by instructors to impose their own perspectives, or students who do not for anything but to win, which sometimes may result in cyber-bullying.

The disadvantages reported in this section suggest one reality again, that is there is no flawless system capable of simulating complex learning. However, ever increasing sophisticated products which have the ability to create reflection, innovation, pedagogic coherence and fun can break the vicious circle of reluctance and failure of students.

2.5.5. Motivation in CALL

The role of educational technology in learner motivation, in a negative but mainly positive way, has been the ongoing concern to raise students' engagement with language learning opportunities and ultimately their levels of achievement. Although it is believed that kids are naturally enthusiastic to extend their insight about the world, appropriate motivational techniques and tools can be involved into the procedures in order for a developed consciousness and low level of uneasiness that keep inspiration up and secured.

Without revisiting the significant benefits of hypermedia, it must be noted that courseware advancement and online Computer Assisted Language Learning (CALL) applications specifically have profited from intelligence which suits for self-ruling learning while protecting the learners' self-esteem despite some studies that show mix results about the impact of these delivery modes on students' performance.

Aiming at contributing to this debate, Nikou & Economides (2016) designed self-assessment tasks in quiz format to inspect the effect of portable devices on

student's motivation, and analysis of the results indicate that mobile mediators increase their intrinsic motivation, delight and interest of the assignment itself, and extrinsic motivation, inspiration to take part in a movement since it is rewarding. Especially low-achieving students, who experience deep disappointment and need support more than others, seem to enjoy from this favorable intervention.

One of the most notable components of the classroom environment is the nature of the relationship among students whose motivation depends on training atmosphere characterized by a climate of support, fun and competition. The basic assumption underlying this section is that exhausting lessons can be extremely unpleasant and the quality of L2 input is as essential as quantity for multidimensional psychological construct of classroom life.

A recent study (Chen & Law, 2016) that inspected whether the arrangement of various platforms, in particular hard and soft scaffolds, have impacts on students' learning performance and motivation revealed that even though it is observed that students lost competence and interest when they play instructive games, GBL situations have impressive guarantee in advancing learning results and inspiration.

Students can build a learning base from computerized situations when they are called to effectively connect formal and informal data to seek after answers utilizing basic deduction abilities. Besides, they have a chance to control the path towards an objective which introduces game content and disciplinary content simultaneously at which they govern the initiation to complete a task.

The general picture rising up out of these records is that web based gaming is highlighted as engaging to give learners a charming background within a framework involving immediate feedback, clear guidelines, and progressive difficulty levels, which allow contribution from numerous students on a similar task in a lovely, casual air in the classroom.

However, there are a couple of caveats that must be attached to the relationship between educational games and motivation. In some cases, where activities are not engaging or excessively difficult, these amusing educational games may detrimentally affect students' abilities which lead them to have negative sentiments towards the target language, and therefore, a decrease in their motivation level might be seen (Gaynor, 2014).

Any approach, whether it emphasizes kinesthetic effectiveness or multi-user virtual environments, there is an ultimate need for instructor's intervention in order for

additional unpredictable, naturalistic, classroom-based undertakings, particularly those including innovation rich exercises. Because, in spite of the fact that innovation rich exercises are regularly observed as a key part in connecting today's learners with 21st century, immersive innovation based exercises are frequently condemned as being able to do just creating innovation and, once students get used to these assignments, it is demonstrated that they lose their interest and curiosity, eventually motivation.

2.6. Web-based Language Learning (WBLL)

The fundamental issue raised in education world is how to take advantage of receptive methods of instruction rather than passive ones that have been discussed several times at length on an empirical basis. Based on a constructivist theory, prevailing paradigms cover a wide range of technologies that include responsive strategies which are more dynamic and intuitive.

It is defined by Bodomo (2010) that contrary to digestive pedagogy that depicts traditional methods of drill, memorized vocabulary, utilization of dictation; interactive learning advances a subtler way to overcome barriers to achieve permanent acquisition processes. Learning theories have been assisted by other fields of science, including psychology and cognitive science, and several approaches that are conceptualization of open-ended linguistic situations, free flow of ideas.

In tandem with these general definitions, a broadly acknowledged model for comprehension and predicting human behavior, social cognitive theory created by Bandura (1986) suggests that an individual take as model the positive reinforced behaviors of those to whom he feels close or people who are superior to him. According to this theory, in modern societies a great part of paradigm shift from teaching to learning happens through electronic cultural assimilation. At this point, multimedia computing and the internet with its rich potential have increasingly become a dominant determinant for satisfying instructional and causal relationships in any classroom, virtual or not.

The web specifically offers autonomy as a standard norm, which becomes a major feature in which a learner has some degree of choice, in the simplest sense. Appropriately, the applicability of all sorts of related constructs capture students' creative problem solving skills with deep satisfaction, which is an undeniable reality that affects the learning outcome and learning climate (Chen, Yeh, Lou & Lin, 2013).

Information technologies have brought people of all ages together via open instructive assets in several ways, such as consultation using forums and webinars, e-

learning surroundings or popular social networks at which new themes are constantly emerging. In this sense, these new forms of technology give birth to a computer literate population who require a digital revolution in education that consists of gratification, freedom of choice and privacy.

To achieve this noble aim, WBLL has the potential to break down the walls that separate the haves and the have-nots in all terms, and to shape fate of the moving picture in training through establishing a contemporary educational landscape where research and experimentation are supported with high–quality standards.

Several studies have pointed out accessibility as foremost benefit of internet, by which anyone can reach web sites from everywhere on the planet as long as the right URL is typed. This huge flexibility in terms of time and space has fairly contributed to growing consumption of technology and information all over the world, in urban areas in particular. While publishers are forced to use digital publishing, all electronically written materials are disseminated through invisible nets at great speed, which attracts the prestigious companies and libraries, or self-employed entrepreneurs.

In addition to this, forming a useful and striking web page has turned out to be rather simple with sound clips, video cuts, and vivified files that make information so intriguing. The members of Knowledge Society always seek shortcuts towards an objective, hence they upgrade the existing resources in all forms of visual language.

The buzzword today is Google, which is joined to all languages as a verb, a means of web search tool that blows our minds with its tremendous sized source data. Mankind who have been unwilling to pick up an encyclopedia to check anything since the invention of moveable type printing press, now ambitiously rely on Google and its equivalents for the sake of learning, of which content is generally English and user-friendly.

Arguably, plenty of studies including Gorjian's (2012) have revealed that while the short time retention of vocabulary is more probable with hypermedia in contrast with paper-based instruments, WBLL fails to progress in the long run. However, the web helps students to develop short term vocabulary preservation and recall as well as online dictionaries that offer different meaning and the pronunciation with regular updates.

As it is proved by Rezvani & Ketabi (2011) with an experimental sequence of study in order to detect whether web sites have significant influence on the

acquisition of grammatical forms by Iranian intermediate EFL learners, apparently integrating online materials into formal mediums affords certain benefits.

For instance, a teacher can mediate between experiential and formal knowledge through content-based instruction for helping students construct meaning by exploiting proven ways of grabbing students' attention, such as incorporating sound or video files that functions as mental pictures for words.

However, it is vital that the instructor understands the driving concept behind a web-based second language instruction's objectives that underlie communicability and mutual intelligibility, which suggests tasks better than drill-and-kill that are not exclusively linguistic.

2.7. Mobile Assisted Language Learning (MALL) and Sample Tools

The unavoidable utilization of cell phones in the public arena has defined this most progressive instrument as cause and effect of relationships among people, language and technology with its enormous penetration rate since 1990s. With the help of its characteristic features like compactness and easy usage, it has become the fastest and cheapest way to generate and transmit knowledge.

Despite worldwide proliferation of hand-held devices, it is hard to say that there are sufficient studies on mobile based education deliveries, which can be seen in many journals including Human Behavior at which there are limited number of articles on examining the effects of mobile apps by July 2016 when it is compared to computer-based educational software and simulations in general (Wang, Wu & Hsu, 2016).

Truth be told, it seems that a single language is not adequate anymore both in and outside the classroom where growing range of uses of mobile learning has made it easier to become bilingual or multilingual thanks to its prevailing strengths that is pointed out by Yanuschik, Pakhomova & Batbold (2015), such as electronic mass media, reference books, e-books, and social networks, as well as online courses and open educational resources.

Although mobile learning in the traditional education is still at its early stages, a rapid emergence of informal means with the wide coverage at high speed service has opened up new opportunities for teaching and learning in various combinations. Breaking temporal and spatial lines, Mobile Instant Messaging (MIM) may bear some advantages like repair moves or negotiation for meaning until participants reach an understanding on modified discourse. Because of its ongoing

nature, WhatsApp, which is an application that is already very popular among young learners, allows repeating, elaborating or simplifying the original message on any topics, unlike teacher-led chats at schools (Andujar, 2016).

With regard to education that takes place outside the formal academic settings, Chan, Chi, Chin & Lin, (2011) indicate reusable and recyclable podcasts which are small size files that can be downloadable onto mobile devices, and provide explicit learning experience with additional resources such as transcriptions, appendixes, online exercises, and forums while imposing target culture on receiver.

As a result of the abundance of uploaders with their videos, a new theme based on catchphrase, "Broadcast Yourself" has penetrated into our routines as a support system for distance learning since 2005. Ensuring that everyone has a chance to remain individual and to become famous on their own, YouTube involves every kind of content except pornography, which is the biggest visual archive including movies, commercials, short clips and free lessons that are a click away.

In the meantime, as Wang (2015) describes that several English classrooms are located on input-output cycle where human agency is prompted by The Bring Your Own Device (BYOD) trend removing costs to maintain special devices that enable student response systems (SRS). Warranting high in-class participation without requiring any expertise or special literacy, "Kahoot!" is an amusing game-based example of these platforms, which is referred extensively in the research section of this study. Entering a unique pin code generated by system, all users connected to a game via their laptop, tablet or smartphone to answer multiple-choice questions in quizzes which are reflected on large screen through teacher's computer that is responsible for hosting the operation. Students compete with each other to give their answers as fast and correct as possible in order to be at the top of the ranking which they see after each question.

Another simple web 2.0 tool that makes testing-solving easier and fun is "Plickers" that does not require many devices but just teachers' computer and a mobile phone on which its application is downloaded. Once you have prepared your questions, you can start distributing the cards to the students which has a number and four options from A to D that a student hold the paper as the true answer stays on the top of it. When students read the question and pick up the correct answer, the screen will reflect on the screen as you scan the QR codes on the sheets, which with the camera of your phone or tablet, and the students will see if they answer correctly.

After each activity, you see the results analysis of the test you are performing in the reports section where you can check who checked which option and what percentage of the students answered the question correctly.

Since students and teachers deserve more, “Edmodo”, which is considered to be a content management system, provides discussion, questionnaires, feedback, homework, multimedia to which users can access via their laptops, PDAs or their smartphones that have Android and IOS operating systems. Selected as one of the top 4 websites in the "Social Networking and Communication" category by American School Library Association in 2011, this social learning environment has 12 subject areas that only teachers can participate in and exchange information with their colleagues, which makes “Edmodo” a professional learning environment as well.

All tools are designed for human-to-human and human-to-machine communication through individual or collaborative tasks where both asynchronous and synchronous models are followed. If educators everywhere throughout the world begin utilizing all these mechanisms, the future will bring us much nearer towards the common objective of all people having fundamental academic and social abilities like basic literacy and IT literacy that are life-sustaining in order to have a respectful job and status in a society.

2.8. Conclusion

In this chapter, the recent developments in both technology, and EFL with its uncontrollable linguistic power were pointed out through historical, political and technological perspective. The consequences of imperialism and Industrial Revolution were reiterated to interpret the global interest in learning English and how it has affected the way people live.

Despite its long history of foreign language teaching dates back to 18th century, Turkey’s instruction model is still fundamentally built on lecturer centered approach that limits the flexibility and creativity of students which resulted in limited fluency to keep up with the fast-growing world.

The brief summary of technology illuminated the indispensable place of these innovations in phenomena of education by eliminating some issues, such as time and space. Because of their assumed advantages like excellence in ubiquitousness and quick information transfer, different mobile technologies permit students participate in any setting easily, which is clearly an urgent solution for less-developed or developing countries. Therefore, investment projects and massive financing have been addressed

to computer aided education in our country as well in order to absorb the benefits of computer literacy. Sample web-based tools belong to the category of integrative CALL which support to distribute the burden on my shoulders as an instructor, also constitute the spine of my research.

In spite of its upgrading state and dominance, there is still a drastic gap between CALL systems and academic staff, which constitutes an impediment for well-organized education. Moreover, technical complications and some risk factors, such as security or plagiarism restrict the extent and efficacy of expected achievement. In the following chapters, it is aimed to shed light on the advantages and shortcomings of CALL that are mentioned and supported by several articles in this section.

CHAPTER III: METHODOLOGY

3.1. Introduction

This thesis aims to investigate English preparatory class students' perceptions on the success and efficiency of computer usage and web-based activities.

This chapter presents the setting and participants of the study along with the instruments and procedures that are employed during the data collection process.

3.2. Research Design

Since this case study, which is subject to descriptive analysis, aspires to find out foreign language learners' attitude towards computer assisted learning and related activities, which is computerized gamification in this research, a two-part questionnaire (Appendix 1) was employed as a data collection method. Some items were gathered into the same set to be measured as a whole for the purpose of interpreting the general picture of participants' views on computer usage and online games in class.

Furthermore, in order to explore whether there is a gender difference in terms of perceptions on computer usage and employing web-based games, some sections about participants' sex and age were included and calculated.

3.3. Setting and Participants

This study was conducted at Istanbul Sabahattin Zaim University Compulsory Preparatory School. Founded by Knowledge Dissemination Foundation in 2010, Istanbul Sabahattin Zaim University (IZU), formerly known as Agricultural Production Administration and Pastoral Professions High School, is a foundation university which is located in Küçükçekmece, Istanbul. Standing out with its vast physical infrastructure and resources, the university, whose motto is 'From a Noble Past to a Bright Future', is aiming at becoming one of Turkey's top seven research universities. Within this content, IZU selects and dispatches students of various languages and nationalities on exchange for the opportunity to gain practical work experience abroad for their professional training.

With respect to this objective, The School of Foreign Languages provides English, Arabic and Russian for students in order to produce international, multi-talented graduates. As for Compulsory English Preparatory School, at the beginning of each academic year an online placement test is used to find out the student's English level, which is formed as A1, A2, B1 and B2 according to their scores.

Students who score over 60 points on the test take a proficiency test to determine whether they have to attend courses at preparatory school or not. After a written examination involving sections to assess each student's four basic skills expertise, they are interviewed by two instructors in an oral examination. The ones who get 70 or more in total, gain the right to start their academic education in their departments directly. Other students who fail to skip the preparatory education are allocated to different levels compatible with their scores that they get from placement test.

All classes are equipped with technological gadgets such as desktop computers, overhead projectors and class wares for each lesson along with wireless internet access.

The study took place in the last quarter of 2015-2016 academic year, and the participants of this research 231 B2 Level students ranging in age from 18 to 22. Since all students who participated in this study had started the university at A1 and in the period when the data collection process was initiated they were at B2, they attended 26 hours intensive training in a week for almost 8 months, thus, they can be seen as well-informed with the university, the English language and teaching procedures utilized in classes.

All students in both groups were asked to give information about themselves concerning their age and sex. With regard to gender, 59,7 % of the students were females and 40,3 % of the students were males. Additionally, regarding their ages, %23,4 of students were 18, %36,4 of students were 19, %29,9 of students were 20, %8,7 of students were 21, and %1,7 of students were 22. The demographic information of subjects for this study is shown in Table 1:

Table 1. Descriptive Characteristics of Students

	Groups	**Frequency(n)**	**(%)**
Gender	Male	93	40,3
	Female	138	59,7
	Total	231	100,0
Age	18	54	23,4
	19	84	36,4
	20	69	29,9
	21	20	8,7
	22	4	1,7
	Total	231	100,0

3.4. Data Collection Instruments

In this study, quantitative data collection instruments were employed to collect the data about the views of students on their computer usage skills and attitude towards web-based activities.

After scanning the related literature and benefiting from similar surveys, the researcher took an expert's opinion to design a questionnaire encompassing two major sections. Firstly, participants were required to give their background information such as age and gender. Then the students were instructed to rate the items in two sections by using a 5-point Likert-type scale with 5 items, ranging from 1 to 5 which were "1= Strongly Disagree, 2= Disagree, 3= Uncertain, 4= Agree, 5= Strongly Agree".

In the first section, the respondents' attitude towards computers was obtained through five related questions. The second section intended to explore students' voices on teachers' ICT preferences including questions on to what extent these instruments affect their motivation, four skills development, learning and motivation. There are also some items which seek to examine the differences between traditional instruction and computer aided teaching as far as students are concerned.

In order to calculate the reliability of the 35 items on the scale of the attitude towards the web-based learning activity, the internal coefficient of consistence, that is "Cronbach's alpha" is calculated. The overall reliability of the scale was observed very high in alpha= 0.913.

Furthermore, in order to discover the construct validity of the scale, an exploratory factor analysis was applied. According to Bartlett test ($p = 0.000 < 0.05$), the relationship between the variables in the factor analysis was confirmed. The test result in (KMO = 0891> 0.60) showed that the sample size is sufficient for applying a factor analysis. During the factor analysis application, the varimax method is carried out to ensure that the structure of the relationship between selected factors remain the same. The total explained variance in the factor analysis of the variables are grouped under 7 factors. According to the alpha and explained variance value in relation to the reliability, the scale on attitude towards web-based learning activities was proved to be reliable and valid. The structure of the scale factors is shown in Table 2:

Table 2. Structure of the Scale Factors on Attitude Towards Web-based Learning Activities

Dimension	Component	Factor Load	Explained Variance	Cronbach's Alpha
F1 (eigenvalue=10.359)	S6	0,809	15,006	0,895
	S7	0,789		
	S9	0,752		
	S8	0,751		
	S12	0,659		
	S14	0,547		
	S10	0,535		
	S24	0,419		
	S25	0,380		
	S13	0,379		
F2 (eigenvalue=2.252)	S18	0,781	11,003	0,837
	S17	0,716		
	S16	0,682		
	S15	0,663		
	S22	0,656		
	S20	0,511		
F3 (eigenvalue=1.890)	S28	0,686	10,985	0,832
	S33	0,682		
	S23	0,678		
	S29	0,673		
	S40	0,607		
	S37	0,429		
F4 (eigenvalue=1.609)	S21	0,641	6,881	0,687
	S39	0,566		
	S31	0,556		
	S26	0,540		
	S11	0,472		
	S27	0,327		
F5 (eigenvalue=1.402)	S32	0,713	5,007	0,639
	S38	0,611		
F6 (eigenvalue=1.337)	S36	0,802	4,330	0,664
	S19	0,580		
F7 (eigenvalue=1.243)	S34	-0,321	4,200	0,629
	S35	0,654		
	S30	0,510		
Total Variance %57.412				

When deciding upon the number of factors in a scale, the scree plot and the number of eigenvalues are analyzed. It was found that a high bend occurred after the first factor. The scree plot related to the factorial structure (scatter) chart is shown below:

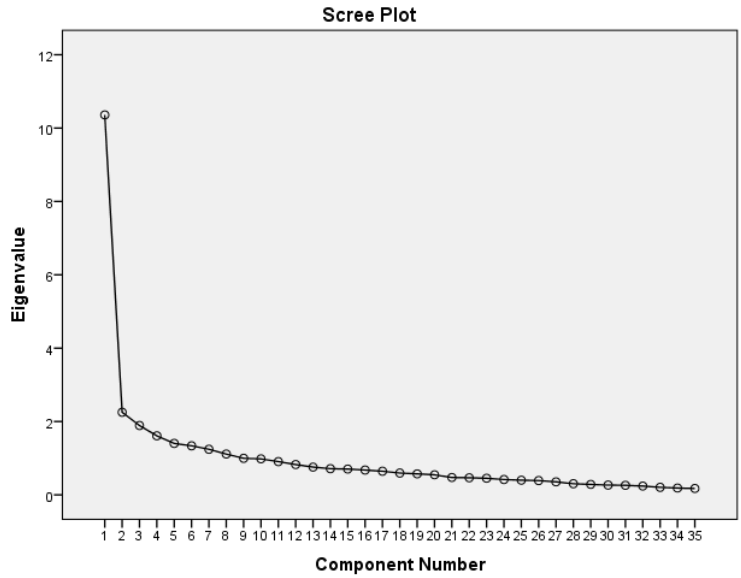

Figure 2. Scree Plot of the Structure of the Scale Factors

When the eigenvalues scatter graph is observed, there is a steep curve after the first point and flat line trend starts. These findings indicate that attitude scale has a single factor structure.

3.5. Data Analysis Procedure

After submitting the aim and the method of the study along with a sample questionnaire to the Head of Istanbul Sabahattin Zaim University English Preparatory School, the permission was granted, and the questionnaire was conducted with the students in their classrooms on 5th May in 2016.

In order to avoid comprehension problems instructions and questionnaire were given in Turkish, and the necessary explanation was made by teachers in both English and Turkish when it was needed.

Having collected the questionnaire, the data obtained were analyzed by using SPSS (Statistical Package for Social Sciences 22.0.) for Windows. Number, percentage, mean, standard deviation that is used for descriptive statistics were calculated in order to address the evaluation of the data.

The scores are interpreted in a scale size between 1 and 5. This range has a width of 4 percentage points. This width was divided into five equal width between 1.00-1.79 "very low", between 1.80-2.59 “low”, between 2.60-3.39 “average”, between 3.40-4.19 “high”, between 4.20-5.00 “very high”.

When comparing two independent groups’ quantitative data, Mann-Whitney u-test, and t-test were calculated to find out if there is significant difference in terms of median scores of answers for the Likert- scale items.

The findings were evaluated at the 95% confidence interval and 5% significance level.

3.6. Conclusion

This section introduced all elements of the research in detail such as setting and participants along with instruments and procedures. The background information of university and preparatory school students were presented as well.

In the next chapters, the results obtained from questionnaire will be interpreted by following data analysis procedure.

CHAPTER IV: DATA ANALYSIS AND RESULTS

4.1. Introduction

In this chapter, in the light of analyzed statistical data which were collected to investigate the students' perceptions on computers, and web-based activities implemented by instructors in class hours, the percentages, frequencies, means and standard deviations of the variables are illustrated and research findings were converted into percentages on the graphs.

In order to solve the problem of the research, based on the findings, explanations and comments are made based on the data that were obtained from students who participated in the research through questionnaire.

4.2. Analysis of the Questionnaire

In the first section, the respondents' attitude towards computer was obtained through five related questions. The second section intended to explore foreign language learners' attitude towards computer assisted learning and related activities.

4.2.1. Descriptive Statistics for Frequencies for Computer Use

The distribution of the statements concerning the computer use which was collected in section one is shown in Table 3:

Table 3. Descriptive Statistics for Statements on Computer Use

ITEM	Strongly Disagree		Disagree		Uncertain		Agree		Strongly Agree			
	f	%	f	%	F	%	f	%	f	%	Mean	SD
I am good at using a computer.	7	3,0	19	8,2	49	21,2	119	51,5	37	16,0	3,690	0,940
Computers speed up my learning.	6	2,6	18	7,8	72	31,2	92	39,8	43	18,6	3,640	0,958
I like using computers.	6	2,6	23	10,0	36	15,6	101	43,7	65	28,1	3,850	1,025
I like learning new things through computers.	2	0,9	11	4,8	35	15,2	110	47,6	73	31,6	4,040	0,859
English can be learnt better by a computer.	3	1,3	18	7,8	44	19,0	114	49,4	52	22,5	3,840	0,907

The participants' responses, who took part in the study, to the statements on the use of computers are examined.

As for the expression of "*I am good at using computers*." 3,0% of students (n=7) strongly disagree, 8,2% (n=19) do not agree, 21,2% (n = 49) are uncertain, 51,5% (n=119) agree and 16,0% (n=37) strongly agree. Therefore, the students show high level of agreement on the statement (3,690 ± 0,940) and have good faith in their computer knowledge and skills.

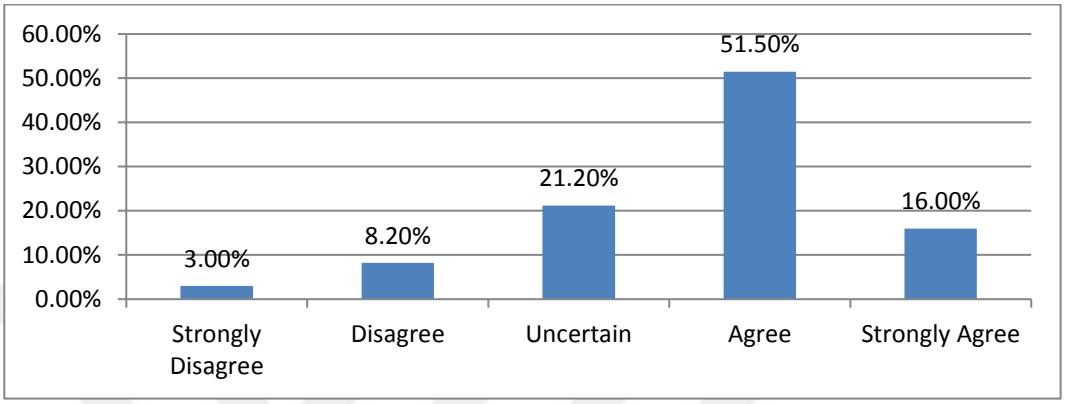

Figure 3. "I am good at using computers." (Item 1)

The students highly agreed on the statement of "*Computers speed up my learning*." (3,640 ± 0,958). 2,6% of students (n=6) strongly disagree, 7,18% (n=18) do not agree, 31,2% (n=72) are uncertain, 39,8% (n=92) agree and 18,6% (n=43) strongly agree. Audio-visual materials make it quicker for students to grasp the information.

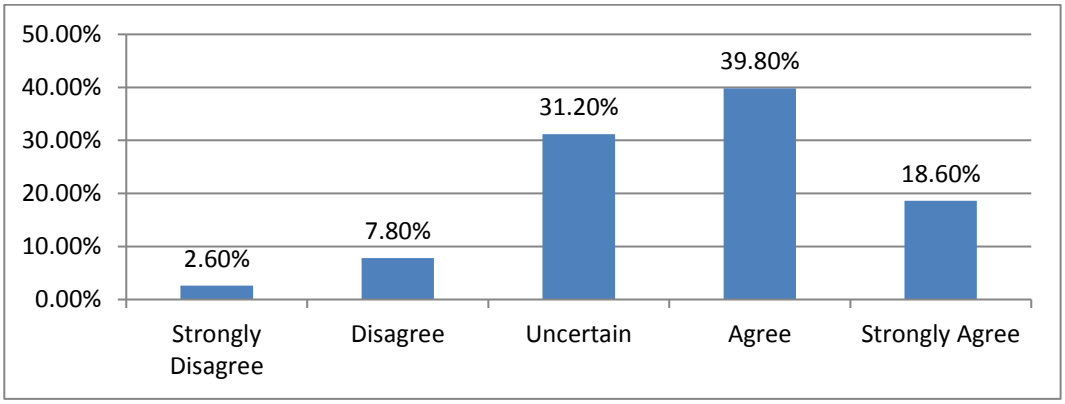

Figure 4. "Computers speed up my learning." (Item 2)

The students show positive attitude towards computers and it is reflected on the outcomes of the statement (3,850 ± 1,025). 2,6% of students (n=6) strongly disagree, 10,0% (n=23) do not agree, 15,6% (n=36) are uncertain, 43,7% (n=101)

agree and 28,1% (n=65) strongly agree. As one might expect, students love to use all kinds of technological tools, including computers.

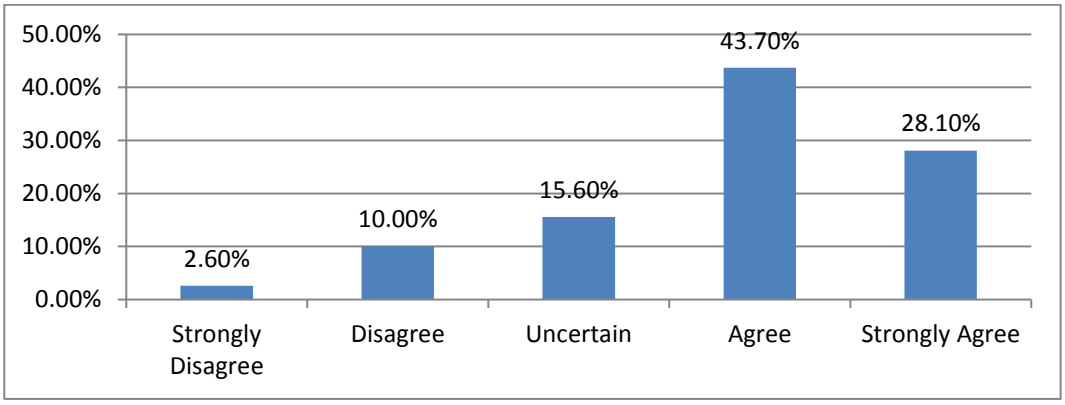

Figure 5. "I like using computers." (Item 3)

For the fourth item which is "*I like learning new things through computers*." 0,9% of students (n=2) strongly disagree, 4,8% (n=11) do not agree, 15,2% (n=35) are uncertain, 47,6% (n=110) agree and 31,6% (n=73) strongly agree. Most participants agree on the statement (4,040 ± 0,859) and it seems that the students prefer to learn anything through computers.

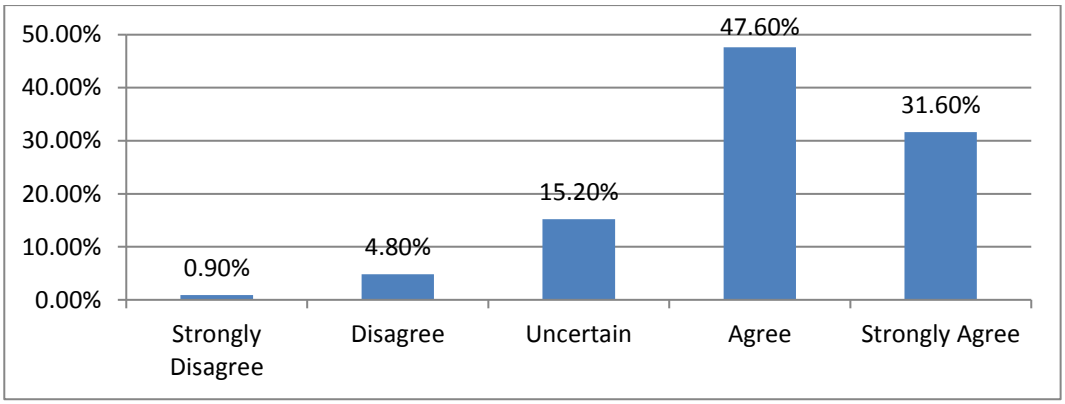

Figure 6. "I like learning new things through computers." (Item 4)

The majority of the participants shares the idea that (3,840 ± 0,907) "*English can be learnt better by a computer*." and 1,3% of students (n=3) strongly disagree, 7,8% (n=18) do not agree, 19,0% (n=44) are uncertain, 49,4% (n=114) agree and 22,5% (n=52) strongly agree. They strongly believe that computer use enhances their learning, especially in English.

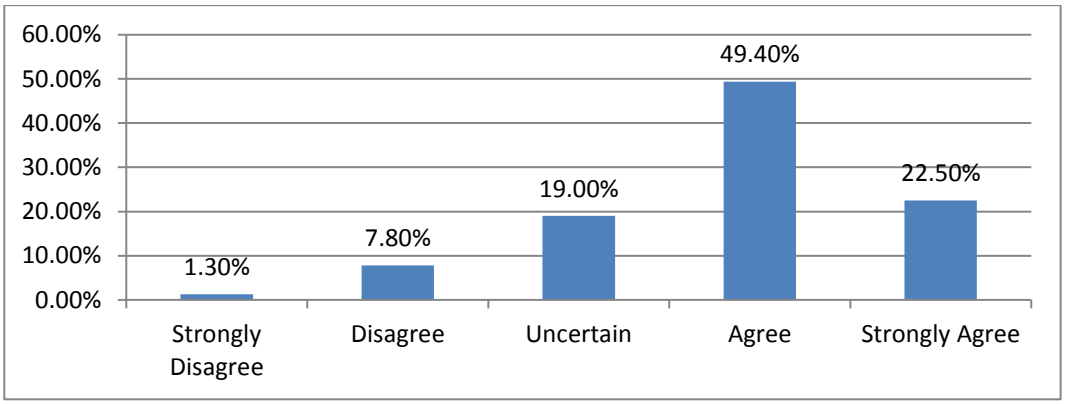

Figure 7. "English can be learnt better by a computer." (Item 5)

4.2.2 Descriptive Statistics for Web-based Activities

A great majority of participants in the research show positive attitude towards the statements about web-based tools in general (3,331 ± 0,558).

Table 4. Descriptive Statistics for Web-based Activities

	N	Min.	Max.	Average	Ss.
Attitude Towards Web-based Activities	231	1,940	4,890	3,331	0,558

As Table 4 shows, the students find computer oriented applications favorable. They know and appreciate the benefits of the presence of computers along with web in class as these ways of instruction with its rich content offer a great deal of instruments eliminating the limited scope of course books.

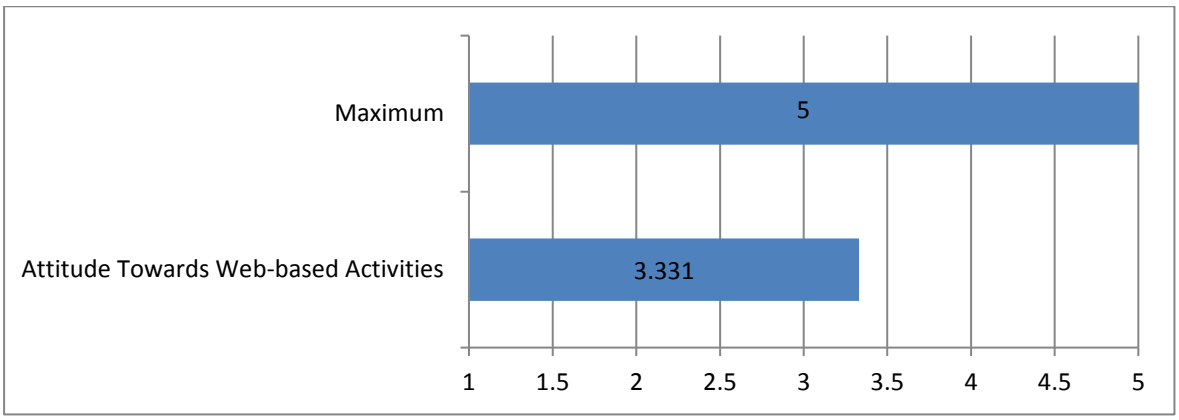

Figure 8. Attitude Level of Students Towards Web-based Activities

The distribution of the statements concerning the web-based activities which were collected in section two is shown in Table 5:

Table 5. Descriptive Statistics for Statements on Web-based Activities

ITEM	Strongly Disagree		Disagree		Uncertain		Agree		Strongly Agree			
	f	%	f	%	f	%	f	%	f	%	Mean	Sd
I want to play web-based games more (Kahoot etc.).	13	5,6	29	12,6	43	18,6	62	26,8	84	36,4	3,760	1,227
These games promote my learning.	7	3,0	20	8,7	44	19,0	99	42,9	61	26,4	3,810	1,021
Games must be used in all courses.	21	9,1	37	16,0	59	25,5	61	26,4	53	22,9	3,380	1,252
The more we play games, the more I want to come to school.	25	10,8	62	26,8	50	21,6	38	16,5	56	24,2	3,160	1,348
To practice is more useful than playing games.	16	6,9	14	6,1	74	32,0	73	31,6	54	23,4	3,580	1,119
Traditional methods are more effective than CALL.	13	5,6	87	37,7	79	34,2	36	15,6	16	6,9	2,810	1,001
The classes which play Kahoot are more successful.	28	12,1	64	27,7	74	32,0	37	16,0	28	12,1	2,880	1,183
We can learn English by just playing games.	74	32,0	83	35,9	44	19,0	14	6,1	16	6,9	2,200	1,159
Web-based activities offer a cheerful and stress-free atmosphere.	12	5,2	21	9,1	36	15,6	110	47,6	52	22,5	3,730	1,070
Web-based activities develop my listening skill.	13	5,6	10	4,3	42	18,2	122	52,8	44	19,0	3,750	0,998
Web-based activities develop my reading skill.	15	6,5	34	14,7	74	32,0	82	35,5	26	11,3	3,300	1,061
Web-based activities develop my writing skill.	30	13,0	58	25,1	62	26,8	62	26,8	19	8,2	2,920	1,170
Web-based activities develop my speaking skill.	24	10,4	54	23,4	58	25,1	71	30,7	24	10,4	3,070	1,172
My teachers find web-based activities favorable.	20	8,7	29	12,6	74	32,0	89	38,5	19	8,2	3,250	1,062
Web-based activities have positive impact on my motivation.	9	3,9	23	10,0	57	24,7	93	40,3	49	21,2	3,650	1,044
CALL is not as effective as traditional teaching.	23	10,0	82	35,5	68	29,4	43	18,6	15	6,5	2,760	1,071
Web-based activities develop my vocabulary.	6	2,6	15	6,5	35	15,2	134	58,0	41	17,7	3,820	0,890
I think games like Kahoot are a waste of time.	63	27,3	96	41,6	37	16,0	25	10,8	10	4,3	2,230	1,098
Web-based activities give opportunity to practice.	6	2,6	22	9,5	44	19,0	125	54,1	34	14,7	3,690	0,927

Computers and games make learning permanent.	7	3,0	28	12,1	56	24,2	103	44,6	37	16,0	3,580	0,996
Teachers must benefit from computer more.	4	1,7	32	13,9	64	27,7	93	40,3	38	16,5	3,560	0,980
I prefer web-based activities to do things by hand.	19	8,2	55	23,8	68	29,4	58	25,1	31	13,4	3,120	1,161
I find these games childish.	56	24,2	94	40,7	45	19,5	24	10,4	12	5,2	2,320	1,107
We had better do questions rather than play games.	46	19,9	82	35,5	58	25,1	30	13,0	15	6,5	2,510	1,142
I am scared to lose while playing games.	62	26,8	68	29,4	30	13,0	49	21,2	22	9,5	2,570	1,336
LMS systems save money and time.	14	6,1	53	22,9	64	27,7	67	29,0	33	14,3	3,230	1,135
Both computers and books must be used in class.	4	1,7	5	2,2	17	7,4	135	58,4	70	30,3	4,130	0,777
I find web-based activities confusing.	35	15,2	118	51,1	53	22,9	19	8,2	6	2,6	2,320	0,919
I always have internet access at school.	47	20,3	40	17,3	18	7,8	70	30,3	56	24,2	3,210	1,492
I get immediate feedback in web games.	8	3,5	48	20,8	80	34,6	73	31,6	22	9,5	3,230	0,997
There is too little that interests me in courses.	18	7,8	66	28,6	71	30,7	43	18,6	33	14,3	3,030	1,166
To compete with others while playing games motives me.	18	7,8	24	10,4	40	17,3	89	38,5	60	26,0	3,650	1,196
I like to use authentic materials in class.	7	3,0	12	5,2	35	15,2	126	54,5	51	22,1	3,870	0,917
It is impossible to be unsuccessful if we follow the book.	28	12,1	40	17,3	93	40,3	47	20,3	23	10,0	2,990	1,125
These games have no impact on real life.	47	20,3	73	31,6	68	29,4	26	11,3	17	7,4	2,540	1,152

As for the expression of "*I want to play web-based games more (Kahoot etc.)*" 26,8% (n=62) agree and 36,4% (n=84) strongly agree with the statement. It is observed that students show high level of agreement to the statement (3,760 ± 1,227) and it is obvious students love these games and spend more time playing.

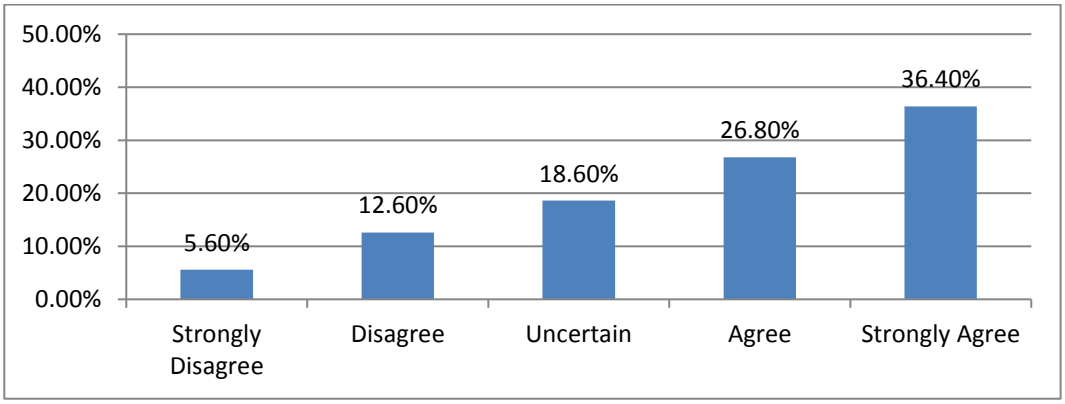

Figure 9. "I want to play web-based games more (Kahoot etc.)." (Item 6)

3% of students (n=7) strongly disagree, 8,7% (n=20) do not agree, 19% (n=44) are uncertain, 42,9% (n=99) agree and 26,4% (n=61) strongly agree on the statement "*These games promote my learning.".* It is clear that students consider these games useful in terms of their learning.

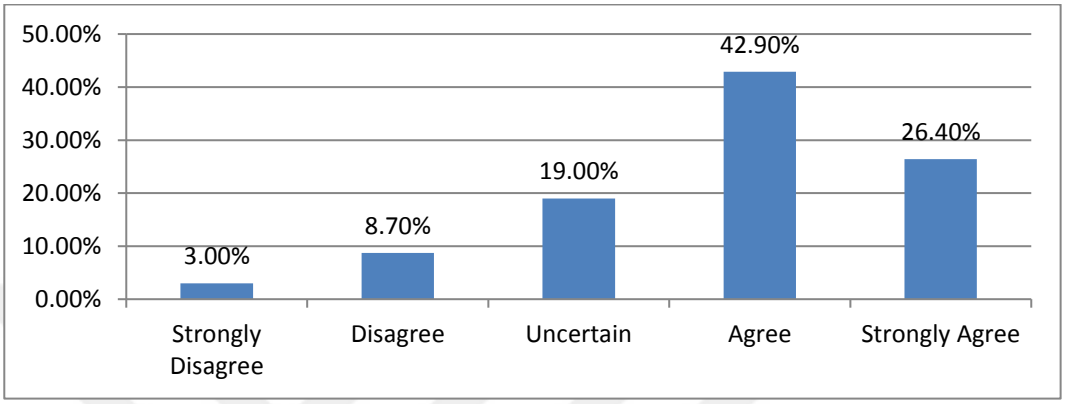

Figure 10. "These games promote my learning." (Item 7)

While 9,1% of students (n=21) strongly disagree, 16% (n=37) do not agree, 25,5% (n=59) are uncertain about the statement of "*Games must be used in all courses.",* 26,4% (n=61) agree and 22,9% (n=53) strongly agree. Although the agreement level is high enough (3,380 ± 1,252), some students believe that paper-based activities are better for their learning in certain courses.

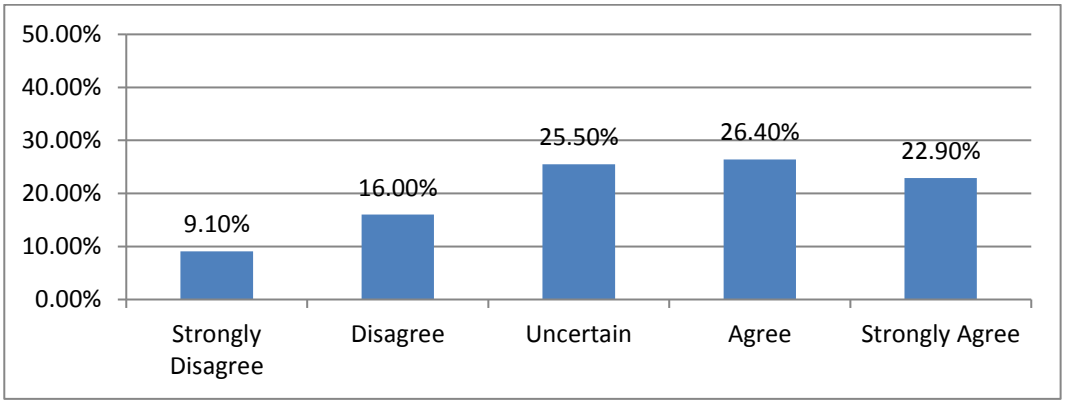

Figure 11. "Games must be used in all courses." (Item 8)

As for the expression of "*The more we play games, the more I want to come to school.",* 10,8% of students (n=25) strongly disagree, 26,8% (n=62) do not agree, 21,6% (n=50) are uncertain, 16,5% (n=38) agree and 24,2% (n=56) strongly agree.

We can infer from results (3,160 ± 1,348), just games or activities are not enough for students to make them come to school with enthusiasm. Perhaps overload, exams and homework, alienate students from lessons.

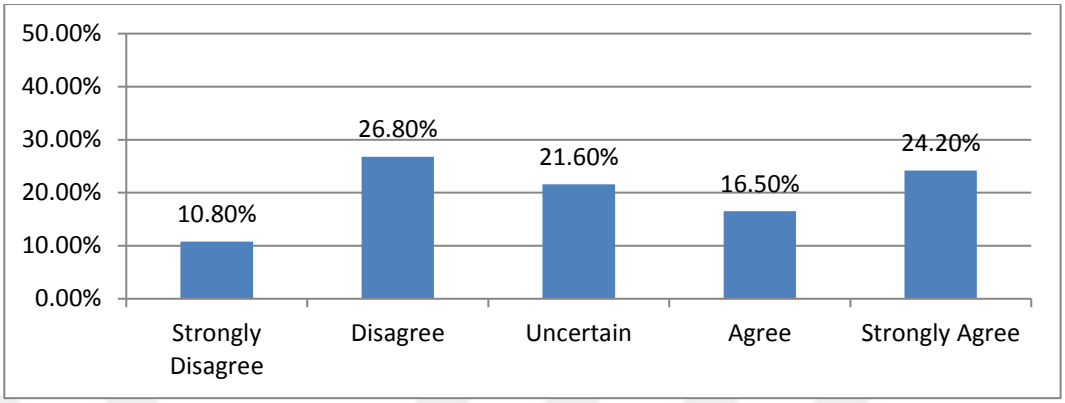

Figure 12. "The more we play games, the more I want to come to school." (Item 9)

For "*To practice is more useful than playing games*.", 6,9% of students (n=16) strongly disagree, 6,1% (n=14) do not agree, 32% (n=74) are uncertain, 31,6% (n=74) agree and 23,4% (n=54) strongly agree. The students considerably agree on the statement (3,580 ± 1,119) and they give practice more value than playing games in order to speak and understand English better.

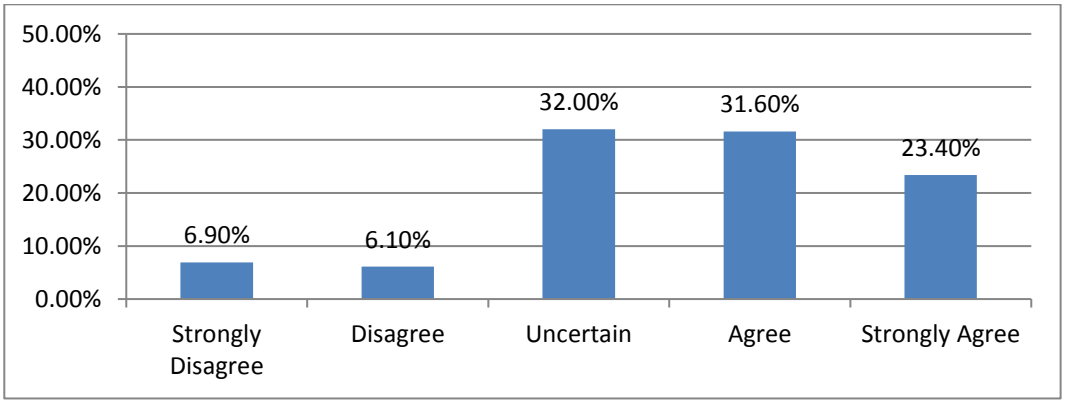

Figure 13. "To practice is more useful than playing games." (Item 10)

When it comes to compare two methods, 5,6% of students (n=13) strongly disagree, 37,7% (n=87) do not agree, 34,2% (n=79) are uncertain, 15,6% (n=36) agree and 6,9% (n=16) strongly agree that "*Traditional methods are more effective than CALL*.". It is observed from the agreement level (2,810 ± 1,001), while the students who think that traditional methods are effective probably believe that that model is

more disciplined and integral, the majority does not think they are more effective than computer mediated instruction, because of its limited perspective and non-objective approach.

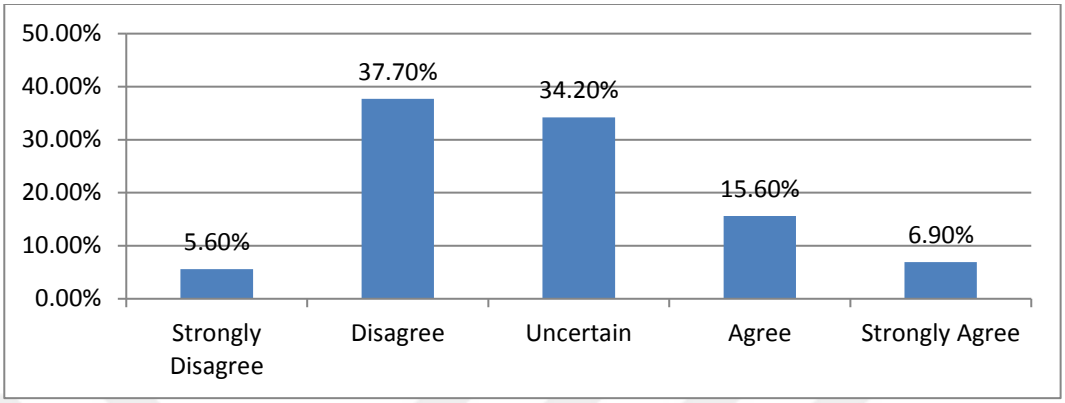

Figure 14. "Traditional methods are more effective than CALL." (Item 11)

The students seem uncertain about the impact of web-based activities (2,880 ± 1,183), especially Kahoot, on their success. 12,1% of students (n=28) strongly disagree, 27,7% (n=64) do not agree, 32,0% (n=74) are uncertain, 16,0% (n=37) agree and 12,1% (n=28) strongly agree that "*The classes which play Kahoot are more successful.*".

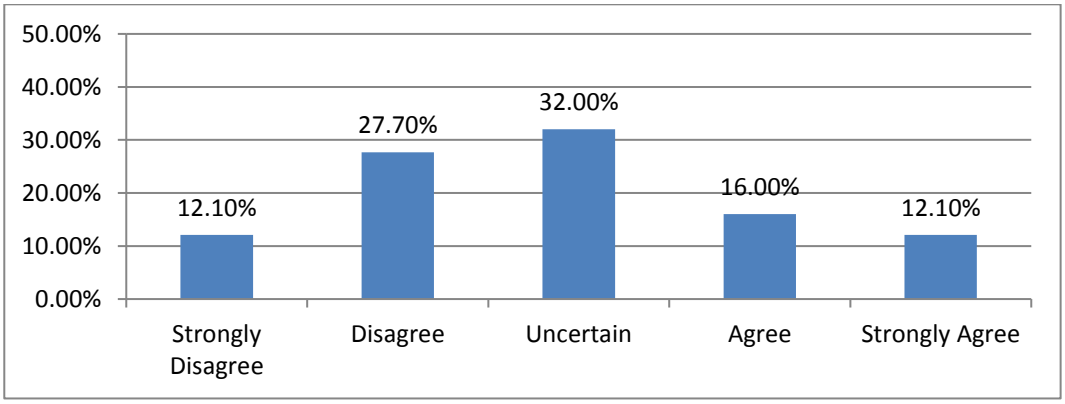

Figure 15. "The classes which play Kahoot are more successful." (Item 12)

It is observed that the participants hardly agree on (2,200 ± 1,159) the statement of *"We can learn English by just playing games*." 32,0% of students (n=74) strongly disagree, 35,9% (n=83) do not agree, 19,0% (n=44) are uncertain, 6,1% (n=14) agree and 6,9% (n=16) strongly agree. More than half of the students do not

bear the idea that they can learn English doing anything else but playing games. It appears that they are responsible enough to consider what is good or bad for them.

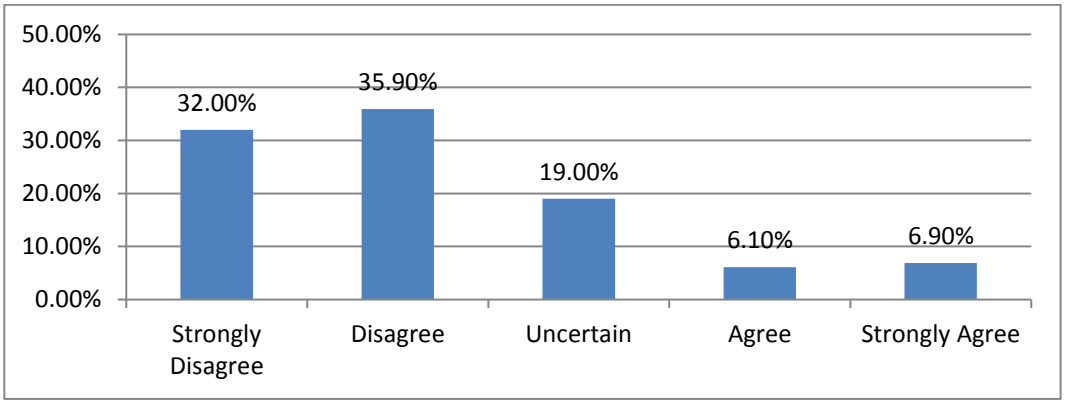

Figure 16. "The classes which play Kahoot are more successful." (Item 13)

162 participants think that these games lower student's anxiety level in class and make it easy for teachers break the shell of shy pupils (3,730 ± 1,070). 5,2% of students (n=12) strongly disagree, 9,1% (n=21) do not agree, 15,6% (n=36) are uncertain, 47,6% (n=110) agree and 22,5% (n=52) strongly agree that "*Web-based activities offer cheerful and stress-free atmosphere.*".

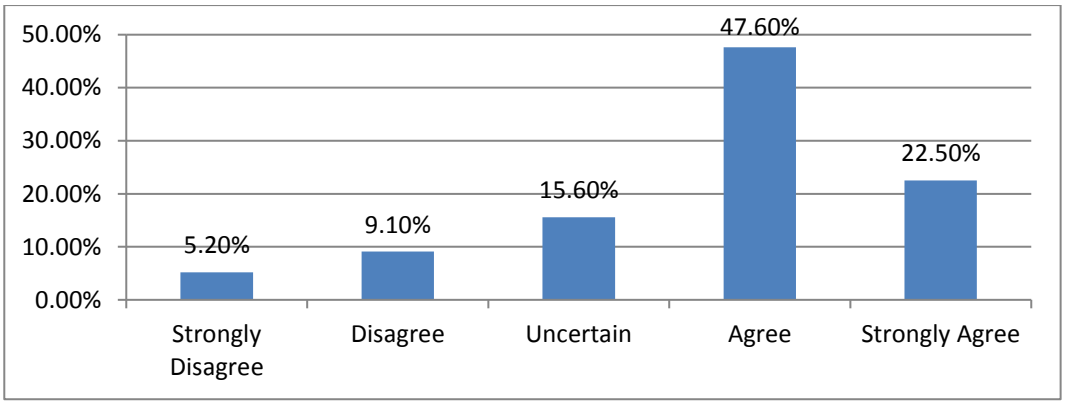

Figure 17. "Web-based activities offer a cheerful atmosphere." (Item 14)

On the first statement about four language skills, 5,6% of students (n=13) strongly disagree, 4,3% (n=10) do not agree, 18,2% (n=42) are uncertain, 52,8% (n=122) agree and 19,0% (n=44) strongly agree that "*Web-based activities develop my listening skill.*". According to these results, the students think that web tools help them to gain and improve their listening skills.

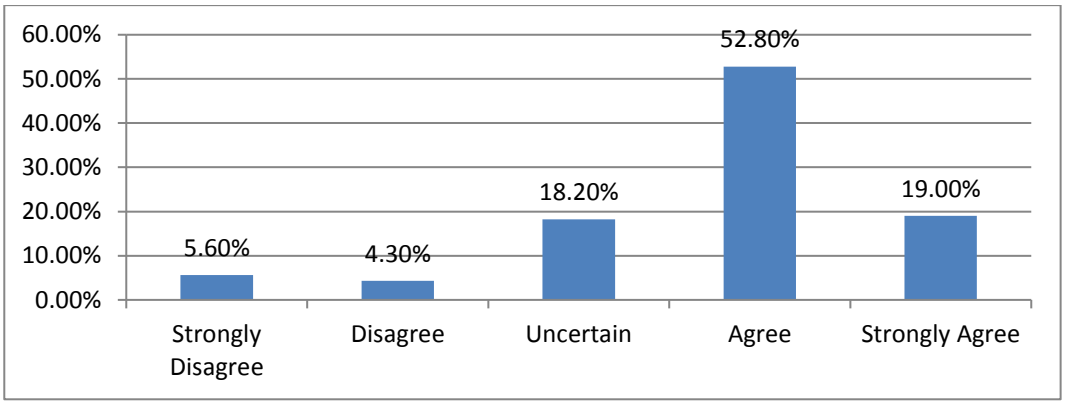

Figure 18. "Web-based activities develop my listening skill." (Item 15)

Unlike the listening skill, participants show less positive attitude (3,300 ± 1,061) towards the effect of these games on their reading abilities. Perhaps it is because teachers neglect or are unaware of using reading passages in activities focusing on comprehension.

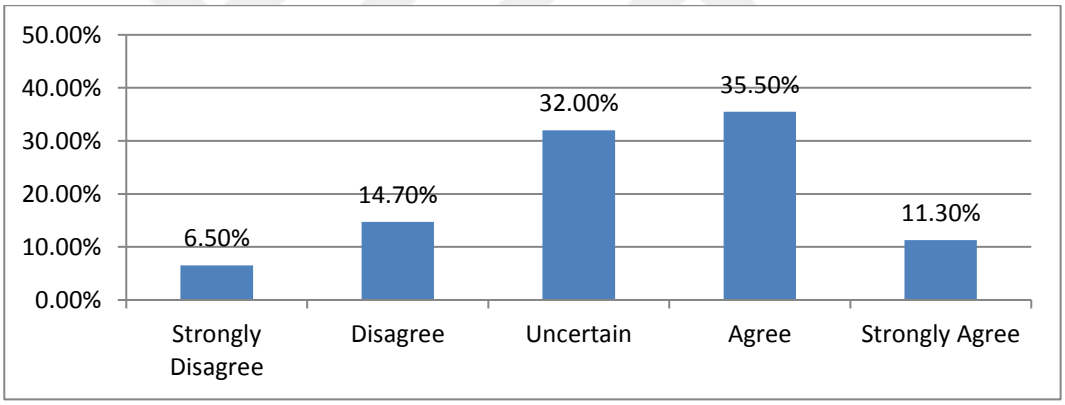

Figure 19. "Web-based activities develop my reading skill." (Item 16)

13,0% of students (n=30) strongly disagree, 25,1% (n=58) do not agree, 26,8,0% (n=62) are uncertain, 26,8% (n=62) agree and 8,2% (n=19) strongly agree that "*Web-based activities develop my writing skill.*" As the agreement level of the students is the lowest (2,920 ± 1,170) among the questions about skills, it is obvious that participants generally do not agree that this kind of exercises develop their writing.

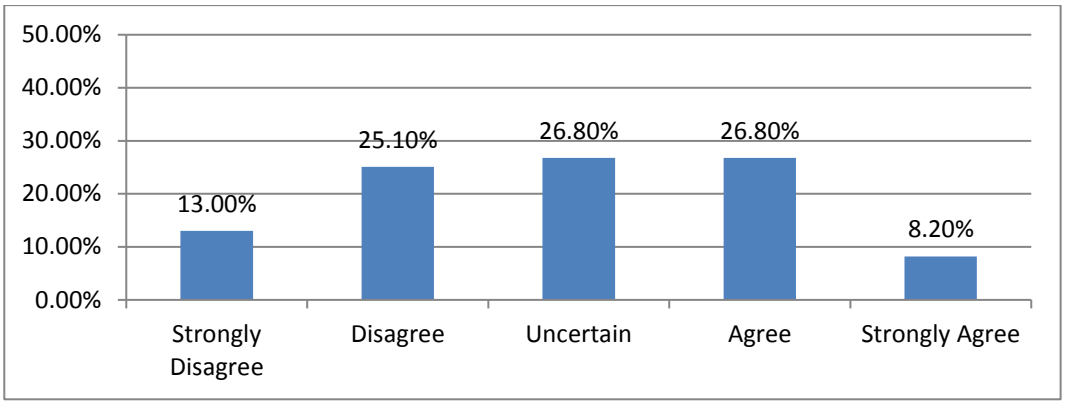

Figure 20. "Web-based activities develop my writing skill." (Item 17)

Last but not least, we asked students their opinions about whether these activities develop their speaking skill or not. 10,4% of students (n=24) strongly disagree, 23,4% (n=54) do not agree, 25,1% (n=58) are uncertain, 30,7% (n=71) agree and 10,4% (n=24) strongly agree. Since the activities do not have voice response system, it is only possible to be useful for their speaking needs indirectly.

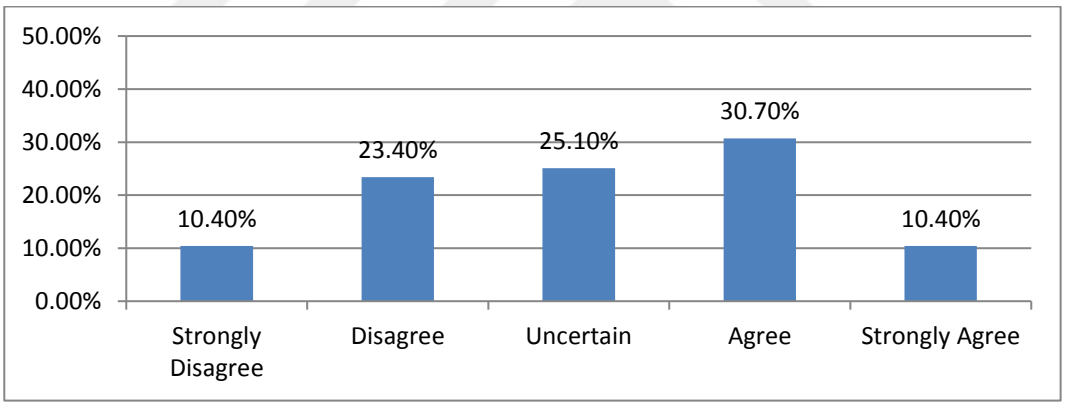

Figure 21. "Web-based activities develop my speaking skill." (Item 18)

The students are divided when it comes to teachers' desire about exploiting web-based games in their classes (3,250 ± 1,062). It is no surprise that some lecturers show resistance and are afraid of doing something outside the textbook. For the expression of *"My teachers find web-based activities favorable."*, 8,7% of students (n=20) strongly disagree, 12,6% (n=29) do not agree, 32,0% (n=74) are uncertain, 38,5% (n=89) agree and 8,2% (n=19) strongly agree.

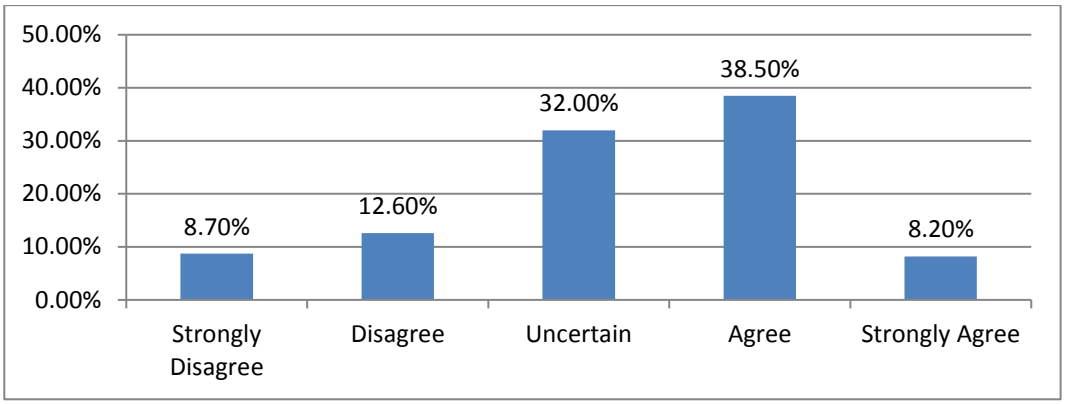

Figure 22. "My teachers find web-based activities favorable." (Item 19)

On item 20, which is *"Web-based activities have positive impact on my motivation."* 3,9% of students (n=9) strongly disagree, 10,0% (n=23) do not agree, 24,7% (n=57) are uncertain, 40,3% (n=93) agree and 21,2% (n=49) strongly agree. Contrary to the 22 students who disagree with the statement, a considerable majority of the students confirms that their motivation is affected in a good way.

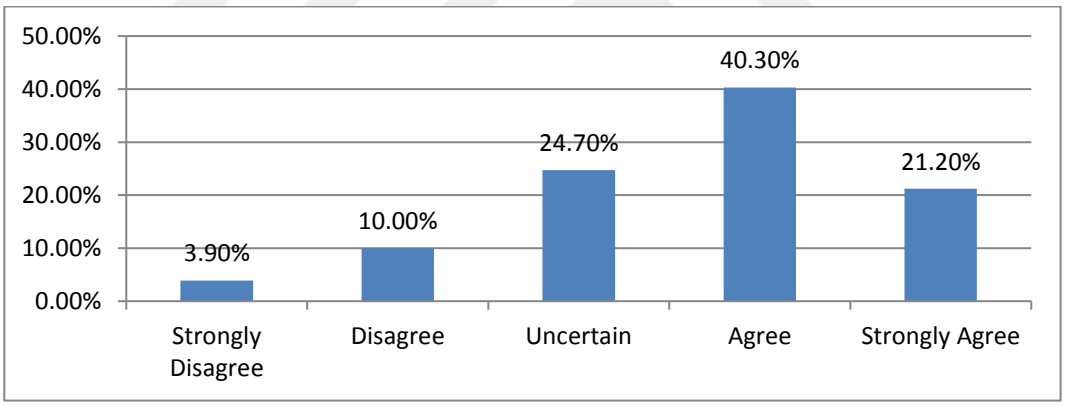

Figure 23. "Web-based activities have positive impact on my motivation." (Item 20)

10% of students (n=23) strongly disagree, 35,5% (n=82) do not agree, 29,4% (n=68) are uncertain, 18,6% (n=43) agree and 6,5% (n=15) strongly agree that "*CALL is not as effective as traditional teaching.*" According to the agreement level (2,760 ± 1,071) and the graph below, just a minority of students recognizes the validity of expression and it is consistent with item 11, which is "*Traditional methods are more effective than CALL.*".

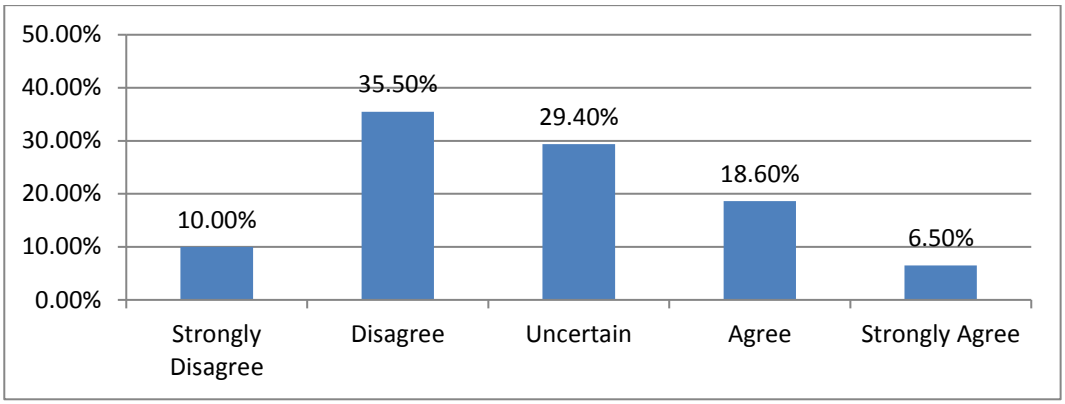

Figure 24. "CALL is not as effective as traditional teaching." (Item 21)

By contrast with the items related to the basic four skills, participants consider these games beneficial to their word powers (3,820 ± 0,890). It is also because of the activities, which are copied from grammar books, focus on vocabulary and grammar drills. 2,6% of students (n=23) strongly disagree, 6,5% (n=82) do not agree, 15,2% (n=68) are uncertain, 58,0% (n=43) agree and 17,7% (n=15) strongly agree.

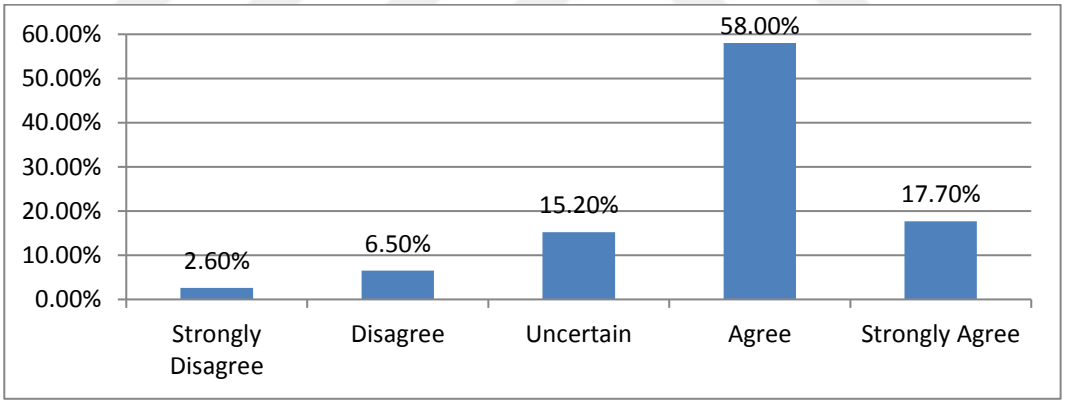

Figure 25. "Web-based activities develop my vocabulary." (Item 22)

As for the expression of *"I think games like Kahoot are a waste of time."* 27,3% of students (n=63) strongly disagree, 41,6% (n=96) do not agree, 16,0% (n=37) are uncertain, 10,8% (n=25) agree and 4,3% (n=10) strongly agree. Out of 231 students only 35 students find these games useless.

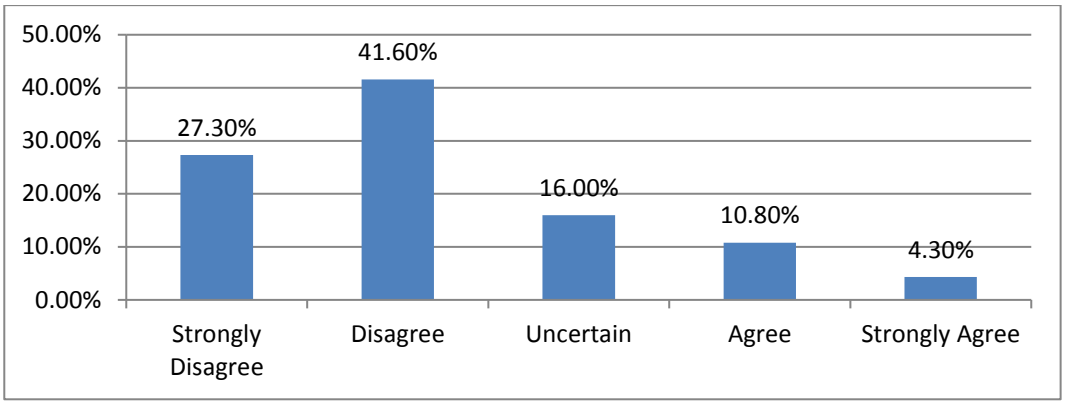

Figure 26. "I think games like Kahoot are a waste of time." (Item 23)

It is regarded that the participants largely agree on (3,690 ± 0,927) the statement of "*Web-based activities give opportunity to practice.*" A great majority of students perceives these web devices a good way to practice and strengthen their learning and 2,6% of students (n=6) strongly disagree, 9,5% (n=22) do not agree, 19,0% (n=44) are uncertain, 54,1% (n=125) agree and 14,7% (n=34) strongly agree.

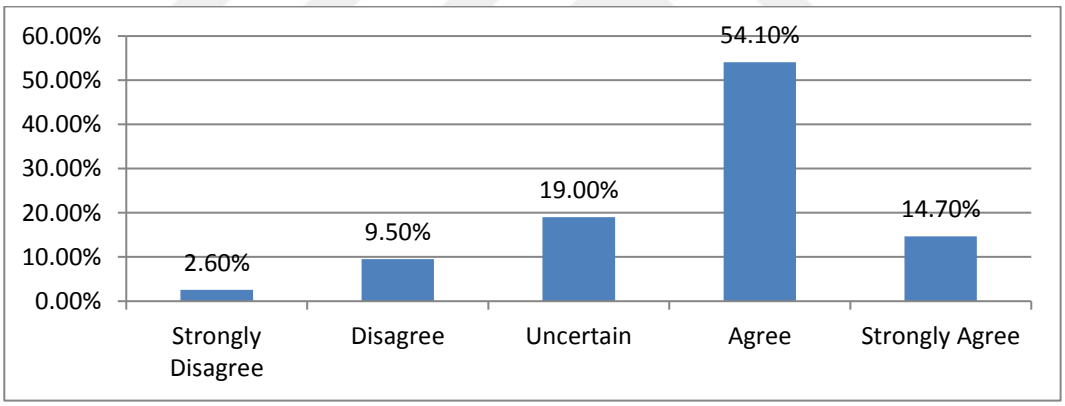

Figure 27. "Web-based activities give opportunity to practice." (Item 24)

Students do not only support the idea of taking advantage of these exercises but also they suppose that they can internalize the information for longer terms thanks to practice. Their high level of agreement on the statement of "*Computers and games make learning permanent.*" (3,580 ± 0,996) proves that argument.

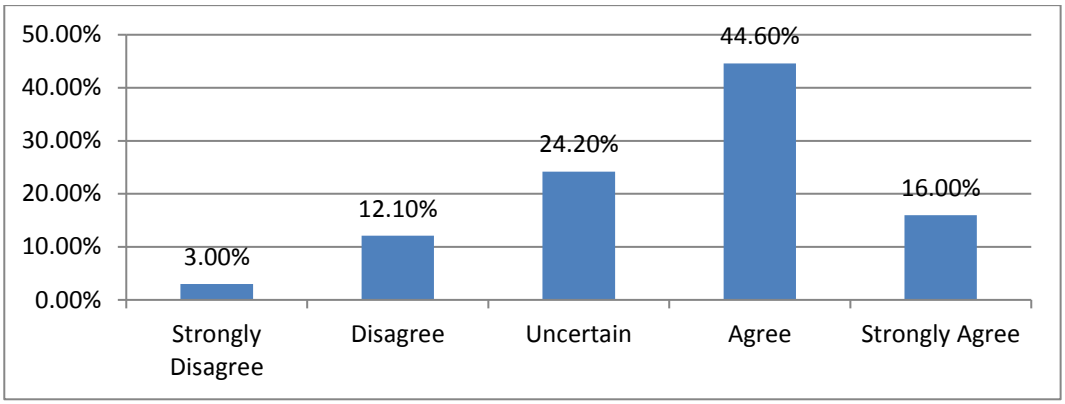

Figure 28. "Computers and games make learning permanent." (Item 25)

Since some teachers find web-based activities unfavorable or not favorable enough as it is shown in Figure 20, they prefer to stay away from computer as much as they can. However, students would rather instructors exploit CALL more and they mainly agree on the statement of "*Teachers must benefit from computers more*." (3,560 ± 0,980).

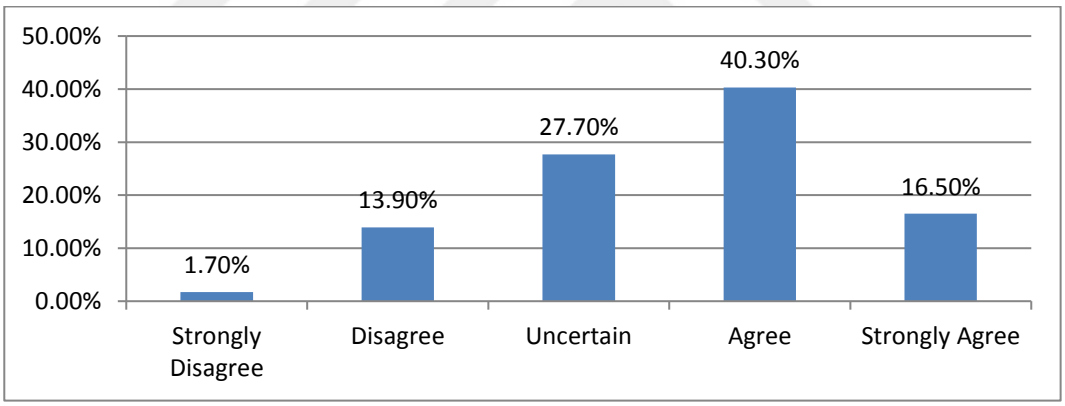

Figure 29. "Teachers must benefit from computers more." (Item 26)

It seems that students tend to enjoy an eclectic approach, both classical and modern ways of instruction. They "*prefer web-based activities to do things by hand*" and 8,2% of students (n=19) strongly disagree, 23,8% (n=55) do not agree, 29,4% (n=68) are uncertain, 25,1% (n=58) agree and 13,4% (n=31) strongly agree on the statement (3,120 ± 1,161).

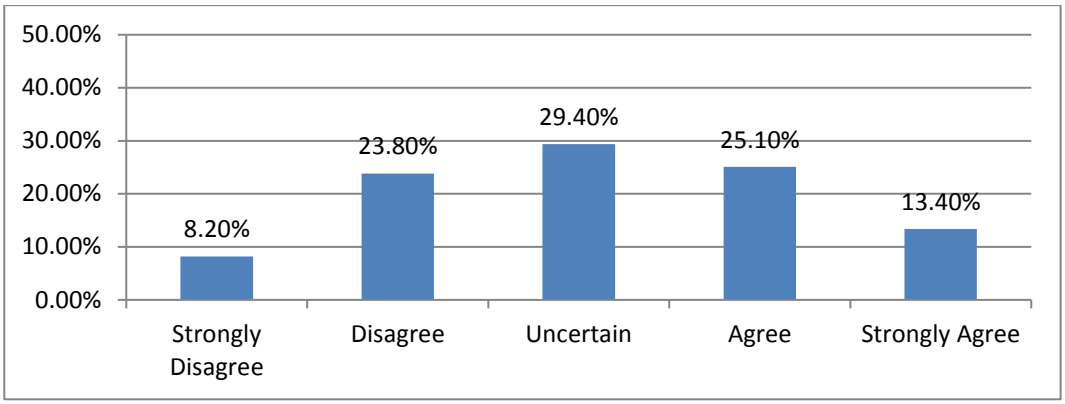

Figure 30. "I prefer web-based activities to do things by hand." (Item 27)

At first, the word "game" sounds like it is something just for younger ages, but as an icebreaker, it always works for all ages, including teenagers and even for adults. Therefore, on the statement of *"I find these games childish."* 24,2% of students (n=56) strongly disagree, 40,7% (n=94) do not agree, 19,5% (n=45) are uncertain, 10,4% (n=24) agree and 5,2% (n=12) strongly agree (2,320 ± 1,107).

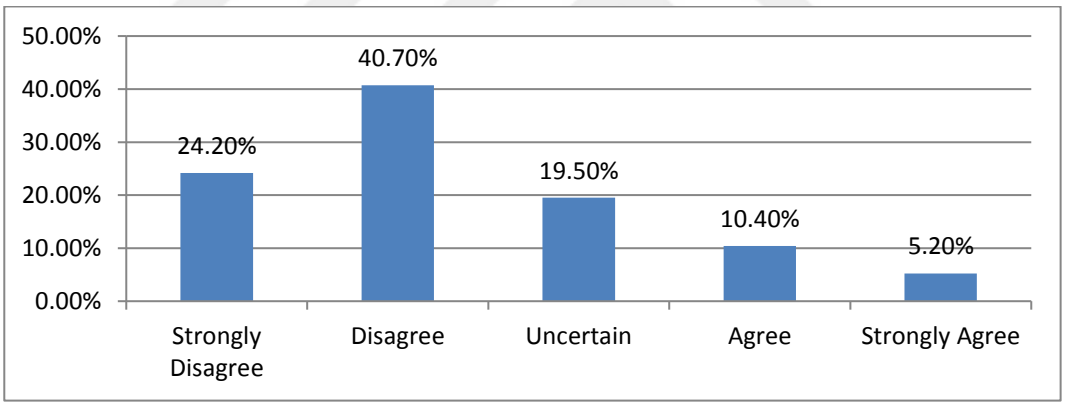

Figure 31. "I find these games childish." (Item 28)

As far as the participants are concerned, "*it is better do questions rather than play games."* 19,9% of students (n=46) strongly disagree, 35,5% (n=82) do not agree, 25,1% (n=58) are uncertain, 13,0% (n=30) agree and 6,5% (n=15) strongly agree with the expression. Understandably, the students do not agree on the statement (2,510 ± 1,142) and they do not want to fill in the blanks or answer comprehension questions because it is boring and they find those exercises challenging.

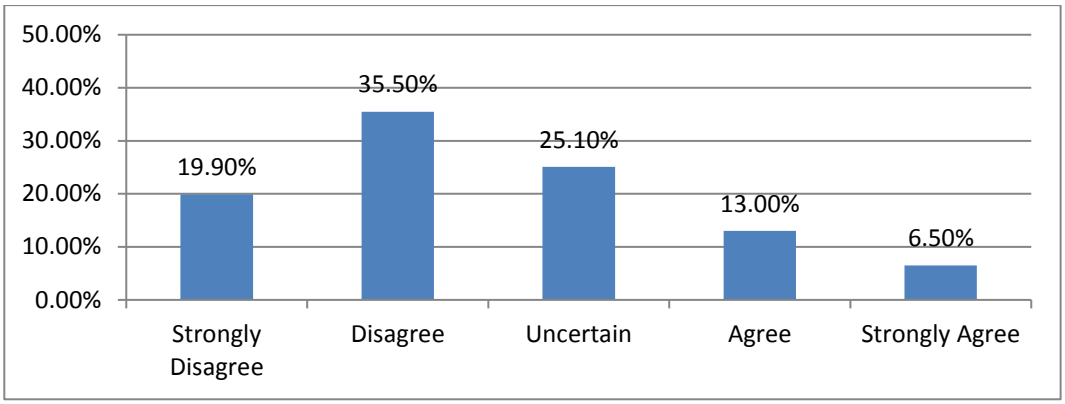

Figure 32. "We had better do questions rather than play games." (Item 29)

Parallel to the responses to the ITEM 14, for the expression of *"I am scared to loose while playing games."* 26,8% of students (n=62) strongly disagree, 29,4% (n=68) do not agree, 13,0% (n=30) are uncertain, 21,2% (n=49) agree and 9,5% (n=22) strongly agree. As web-based activities offer cheerful and stress-free atmosphere, most students do not experience any fear or anxiety during games (2,570 ± 1,336).

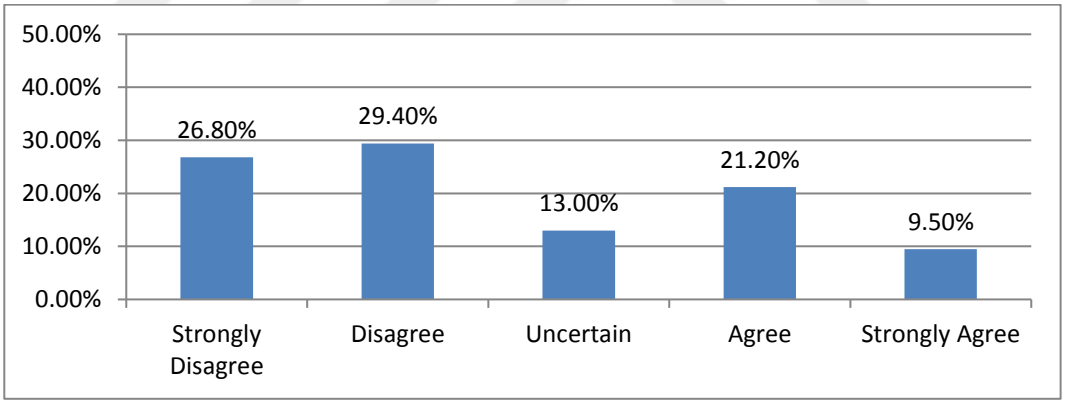

Figure 33. "I am scared to lose while playing games." (Item 30)

In addition to entertaining and enhancing web tools, ubiquitous learning management systems make possible for students to practice and improve themselves anytime they prefer. 6,1% of students (n=14) strongly disagree, 22,9% (n=53) do not agree, 27,7% (n=64) are uncertain, 29,0% (n=67) agree and 14,3% (n=33) strongly agree that "*LMS systems save money and time.*".

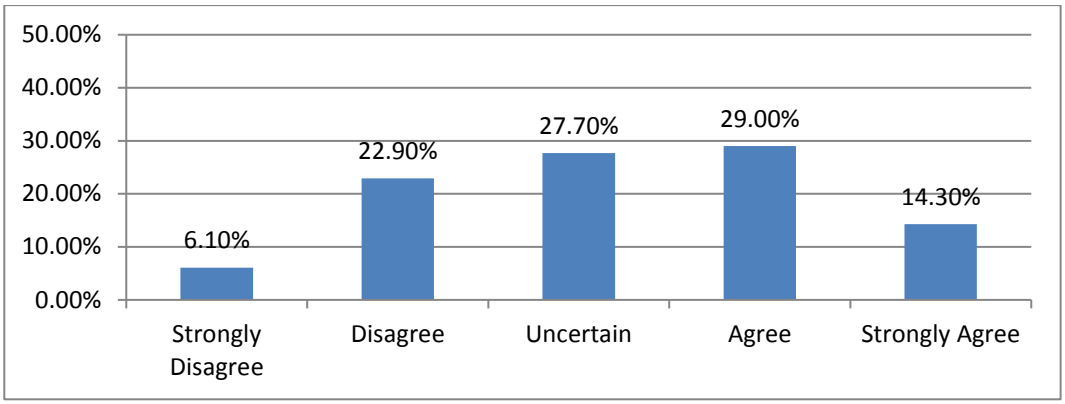

Figure 34. "LMS systems save money and time." (Item 31)

Although students support modern ways of information transfers, it appears that they are mature enough to take their learning process seriously. Besides, they give credit to books for their convenience and supplementary feature (4,130 ± 0,777). 1,7% of students (n=4) strongly disagree, 2,2% (n=5) do not agree, 7,4% (n=17) are uncertain, 58,4% (n=135) agree and 30,3% (n=70) strongly agree that "*both computers and books must be used in class.*".

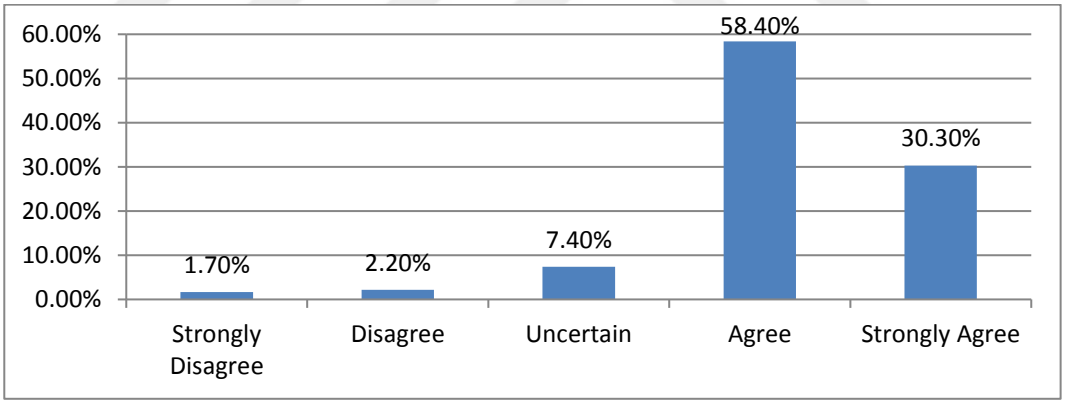

Figure 35. "Both computers and books must be used in class." (Item 32)

Since the ages of participants are between 18 and 22, they are capable of using computers and smartphone as well as video games, which can be clearly seen in the results to the questions concerning computer use. Thus, they have no difficulty in understanding the procedures which echoes to their low agreement level on the statement of *"I find web-based activities confusing."* (2,320 ± 0,919).

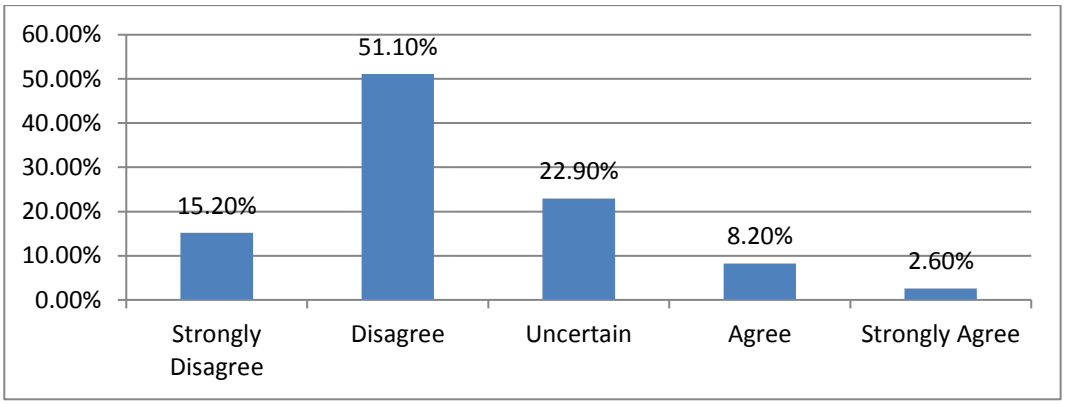

Figure 36. "I find web-based activities confusing." (Item 33)

Obviously, some students have some internet access problems in campus which result in malfunction of using the necessary web sites, and discourage both teachers and students. As for the expression of *"I always have internet access at school."* 20,3% of students (n=47) strongly disagree, 17,3% (n=40) do not agree, 7,8% (n=18) are uncertain, 30,3% (n=70) agree and 24,2% (n=56) strongly agree.

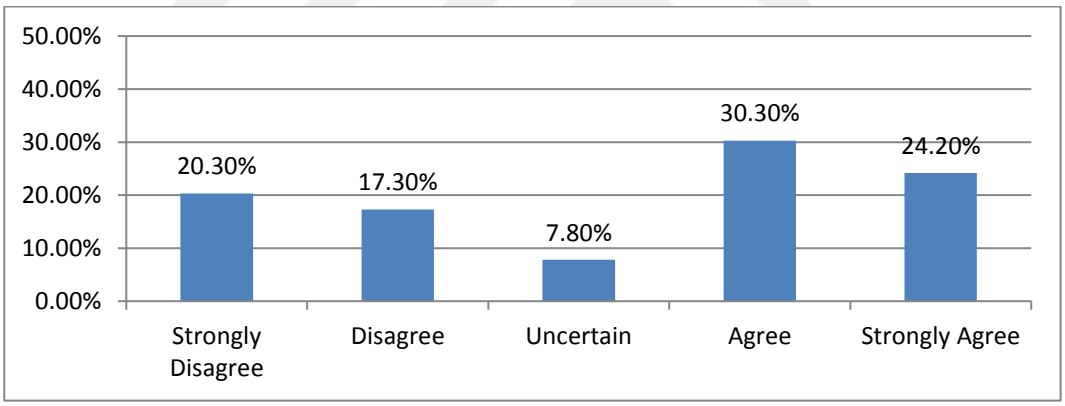

Figure 37. "I always have internet access at school." (Item 34)

The presence of teacher, who facilitates and usually prepares the activities, enables immediate feedback and supervision of students' performance. Thus, for the expression of *"I get immediate feedback in web games."* 3,5% of students (n=8) strongly disagree, 20,8% (n=48) do not agree, 34,6% (n=80) are uncertain, 31,6% (n=73) agree and 9,5% (n=22) strongly agree.

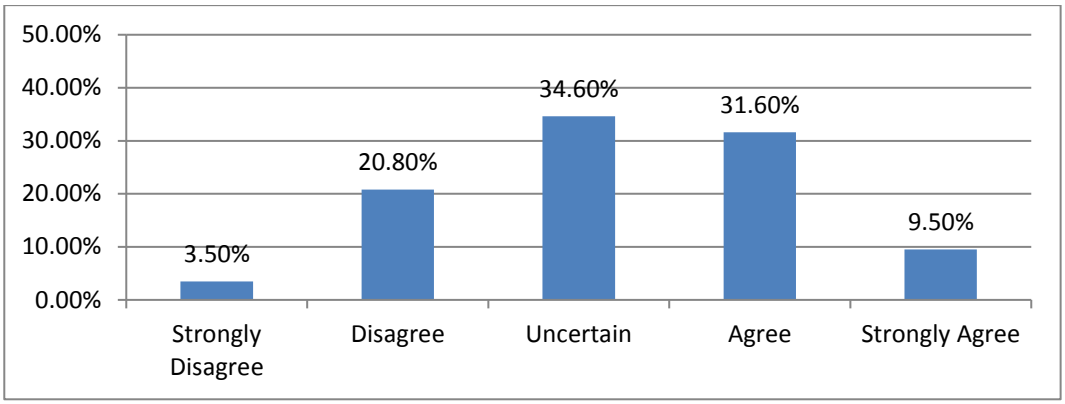

Figure 38. "I get immediate feedback in web games." (Item 35)

7,8% of students (n=18) strongly disagree, 28,6% (n=66) do not agree, 30,7% (n=71) are uncertain, 18,6% (n=43) agree and 14,3% (n=33) strongly agree that "*There is too little that interests them in courses.*". It is surprising that students, who are constantly complaining about lessons, materials and system in general, didn't agree more with the statement. Perhaps, the present situation is not hopeless as much as we suppose.

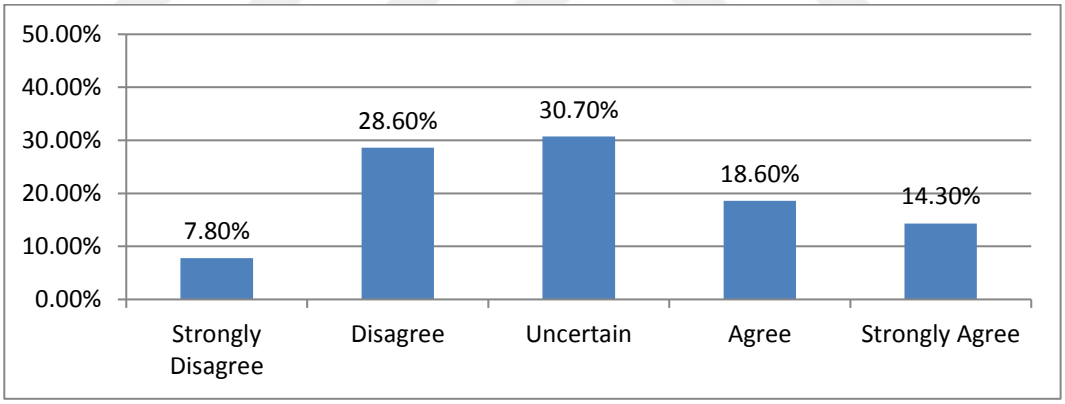

Figure 39. "There is too little that interests me in courses." (Item 36)

The participants hardly agree on the statement of "*To compete with others while playing games motives me.*" (3,650 ± 1,196). Firstly, responses provide consistent results with the previous ones that are related to the motivation and positive class atmosphere. Additionally, games are powerful ways to interest students, but making them compete each other adds some extra thrill to the process.

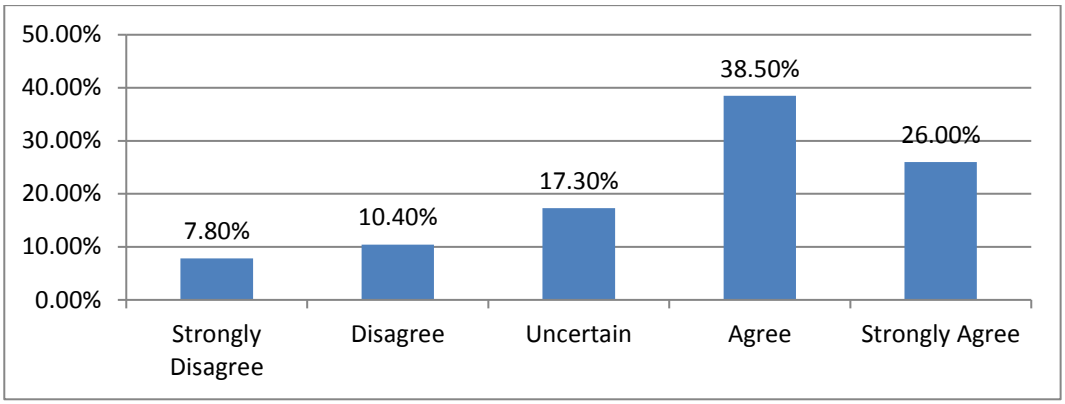

Figure 40. "To compete with others while playing games motives me." (Item 37)

Whether it is based on computer or not, a great majority of students become more enthusiastic when original materials are used. For this reason, 3,0% of students (n=7) strongly disagree, 5,2% (n=12) do not agree, 15,2% (n=35) are uncertain, 54,5% (n=126) agree and 22,1% (n=51) strongly agree to the statement of "*I like to use authentic materials in class.*".

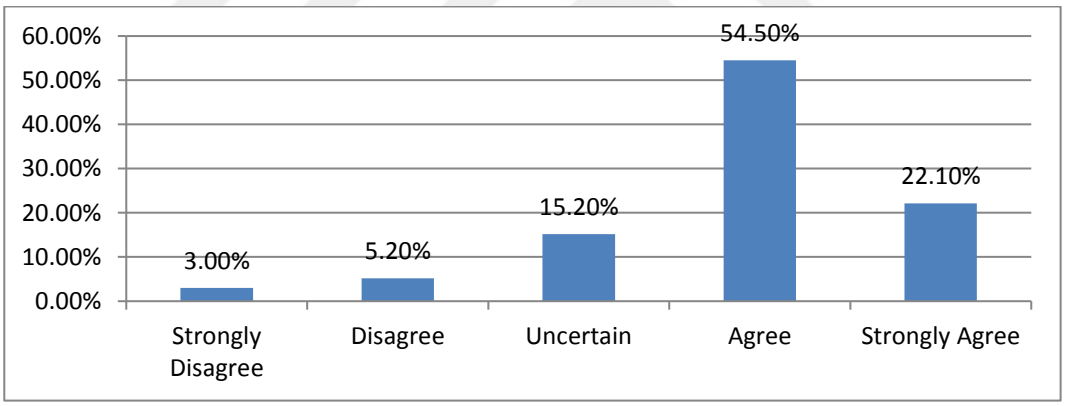

Figure 41. "I like to use authentic materials in class." (Item 38)

It is observed that not all the students are definitely sure that they will be successful if they use just textbooks in class. They are well aware that these days, books alone are not satisfactory and cannot meet all educational demands anymore.

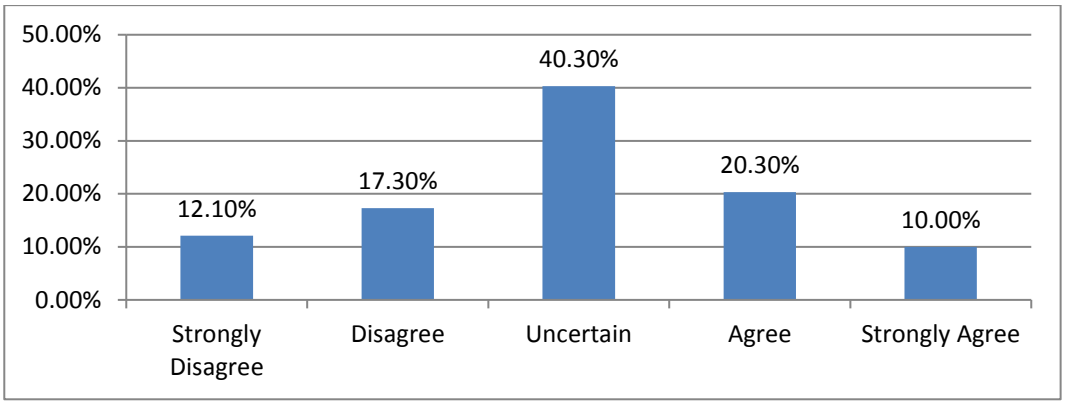

Figure 42. "It is impossible to be unsuccessful if we follow the book." (Item 39)

The participants of the research think that these games and activities consist of some properties that can help students in their lives both in terms of general knowledge and language proficiency. Therefore, 20,3% of students (n=47) strongly disagree, 31,6% (n=73) do not agree, 29,4% (n=68) are uncertain, 11,3% (n=26) agree and 7,4% (n=17) strongly agree that "*These games have no impact on real life.*"

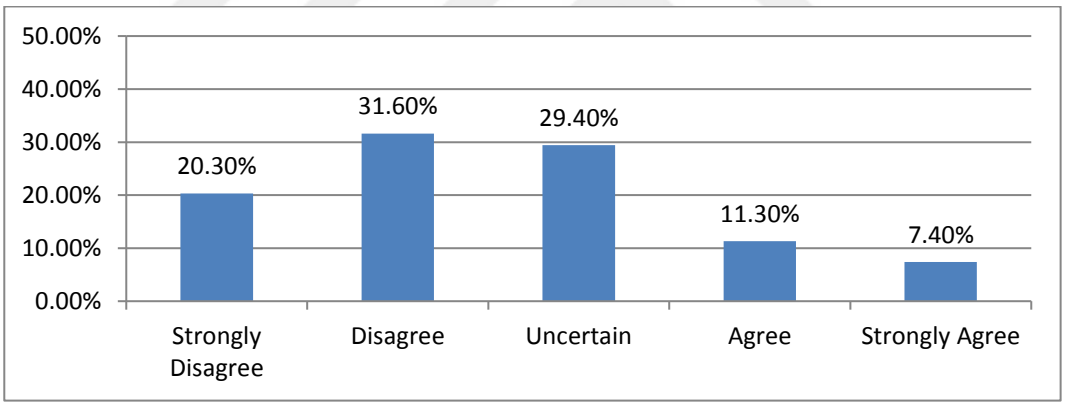

Figure 43. "These games have no impact on real life." (Item 40)

4.2.3. Descriptive Statistics for Web-based Activities by Gender

The participants' attitude scores on the use of web-based activities are examined in an attempt to investigate whether there is a significant difference or not. According to the t-test that was conducted between two groups based on their responses to the statements, it is observed that the mean difference between the groups were statistically is not significant (t=1,871; p=0.074>0,05).

The distribution of the scores and mean concerning the web-based activities is shown in Table 6:

Table 6. Descriptive Statistics for Web-based Activities by Gender

ITEM	Group	N	Mean	SD	t	p
I want to play web-based games more (Kahoot etc.).	Male	93	3,870	1,253	1,154	0,250
	Female	138	3,680	1,208		
These games promote my learning.	Male	93	3,890	1,088	1,014	0,312
	Female	138	3,750	0,973		
Games must be used in all courses.	Male	93	3,440	1,347	0,596	0,552
	Female	138	3,340	1,187		
The more we play games, the more I want to come to school.	Male	93	3,370	1,374	1,872	0,063
	Female	138	3,030	1,318		
To practice is more useful than playing games.	Male	93	3,430	1,255	-1,728	0,099
	Female	138	3,690	1,009		
Traditional methods are more effective than CALL.	Male	93	2,740	1,062	-0,788	0,431
	Female	138	2,850	0,958		
The classes which play Kahoot are more successful.	Male	93	3,120	1,232	2,509	0,013
	Female	138	2,720	1,125		
We can learn English by just playing games.	Male	93	2,450	1,306	2,757	0,009
	Female	138	2,030	1,018		
Web-based activities offer cheerful and stress-free atmosphere.	Male	93	3,840	1,086	1,250	0,212
	Female	138	3,660	1,057		
Web-based activities develop my listening skill.	Male	93	3,770	1,095	0,261	0,794
	Female	138	3,740	0,930		
Web-based activities develop my reading skill.	Male	93	3,320	1,199	0,229	0,826
	Female	138	3,290	0,961		
Web-based activities develop my writing skill.	Male	93	3,040	1,224	1,292	0,198
	Female	138	2,840	1,129		
Web-based activities develop my speaking skill.	Male	93	3,230	1,235	1,627	0,105
	Female	138	2,970	1,120		
My teachers find web-based activities favorable.	Male	93	3,120	1,232	-1,565	0,140
	Female	138	3,340	0,924		
Web-based activities have positive impact on my motivation.	Male	93	3,630	1,159	-0,178	0,864
	Female	138	3,660	0,963		
CALL is not as effective as traditional teaching.	Male	93	2,690	1,179	-0,858	0,408
	Female	138	2,810	0,993		
Web-based activities develop my vocabulary.	Male	93	3,770	0,990	-0,616	0,554
	Female	138	3,850	0,819		
I think games like Kahoot are a waste of time.	Male	93	2,280	1,146	0,520	0,604
	Female	138	2,200	1,068		
Web-based activities give opportunity to practice.	Male	93	3,740	0,988	0,721	0,472
	Female	138	3,650	0,885		
Computers and games make learning permanent.	Male	93	3,720	1,057	1,711	0,088
	Female	138	3,490	0,946		
Teachers must benefit from computer more.	Male	93	3,750	1,028	2,501	0,013
	Female	138	3,430	0,927		
I prefer web-based activities to do things by hand.	Male	93	3,160	1,254	0,477	0,634
	Female	138	3,090	1,097		
I find these games childish.	Male	93	2,300	1,130	-0,168	0,867
	Female	138	2,330	1,095		
We had better do questions rather than play games.	Male	93	2,470	1,221	-0,364	0,716
	Female	138	2,530	1,089		

I am scared to lose while playing games.	Male	93	2,610	1,383	0,387	0,699
	Female	138	2,540	1,308		
LMS systems save money and time.	Male	93	3,320	1,252	1,072	0,302
	Female	138	3,160	1,048		
Both computer and books must be used in class.	Male	93	3,960	0,966	-2,891	0,009
	Female	138	4,250	0,593		
I find web-based activities confusing.	Male	93	2,310	0,932	-0,115	0,908
	Female	138	2,330	0,914		
I always have internet access at school.	Male	93	2,870	1,527	-2,860	0,005
	Female	138	3,430	1,429		
I get immediate feedback in web games.	Male	93	3,250	1,028	0,223	0,824
	Female	138	3,220	0,980		
There is too little that interests me in courses.	Male	93	3,230	1,199	2,107	0,036
	Female	138	2,900	1,129		
To compete with others while playing games motives me.	Male	93	3,850	1,215	2,150	0,033
	Female	138	3,510	1,167		
I like to use authentic materials in class.	Male	93	3,760	1,004	-1,515	0,144
	Female	138	3,950	0,849		
It is impossible to be unsuccessful if we follow the book.	Male	93	2,840	1,154	-1,651	0,100
	Female	138	3,090	1,097		
These games have no impact on real life.	Male	93	2,550	1,156	0,125	0,900
	Female	138	2,530	1,154		
OVERALL	Male	93	3,414	0,621	1,871	0,074
	Female	138	3,275	0,506		

When the results of two groups are examined for the expressions, only in 7 items a significant difference is observed. As for the only two statements, "*Both computers and books must be used in class.*" and "*I always have internet access at school.*", the agreement score of the female participants is higher than males. Although the latter one has no much importance, the former one may have some implications. While other items are more in favor of computer and game play, only this one includes a traditional way of transmitting information and providing education. It is indicated that all students studying English but mostly boys think that schools are more operative and better places with technology.

Furthermore, since boys are more prone to computer use and internet, they have more faith in exploiting these paths, and prefer easy and funny ways to reach their objectives. Besides, they are more interested in and good at playing video games at home as well as their smartphones.

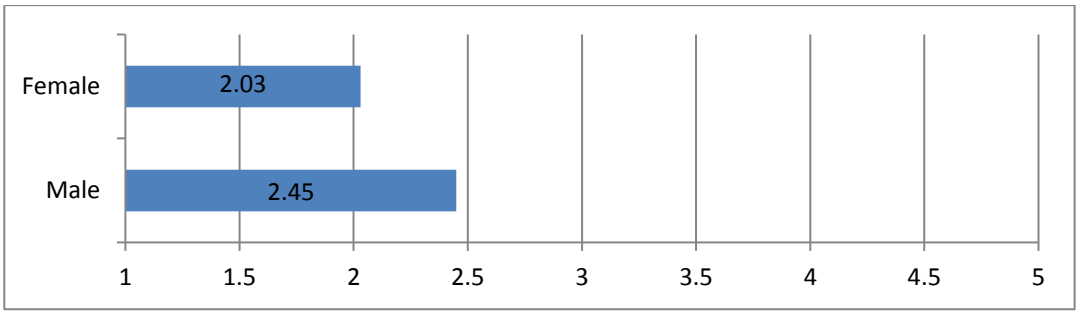

Figure 44. "We can learn English by just playing games." (Item 8)

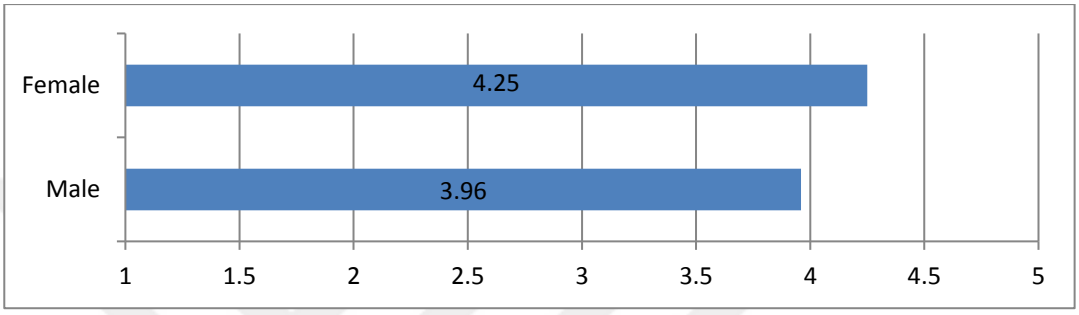

Figure 45. "Both computers and books must be used in class." (Item 21)

For the expression of "*There is too little that interests me in courses."* a significant difference (t=2.107; p=0.036<0,05) is observed, and the score of the male participants' (x=3,230) is higher than girls' (x=2,900).

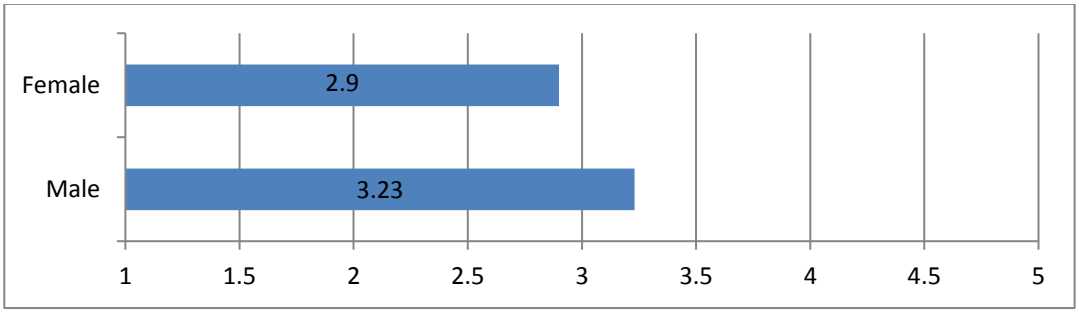

Figure 46. "There is too little that interests me in courses." (Item 36)

In addition to that, when the outcome of the research on the item 37, which is "*To compete with others while playing games motives me.*", is considered, there is a significant difference between groups (t=2.150; p=0.033<0,05). Naturally, boys' score is again higher than girls' and it is because males are more eager to compete and prove themselves.

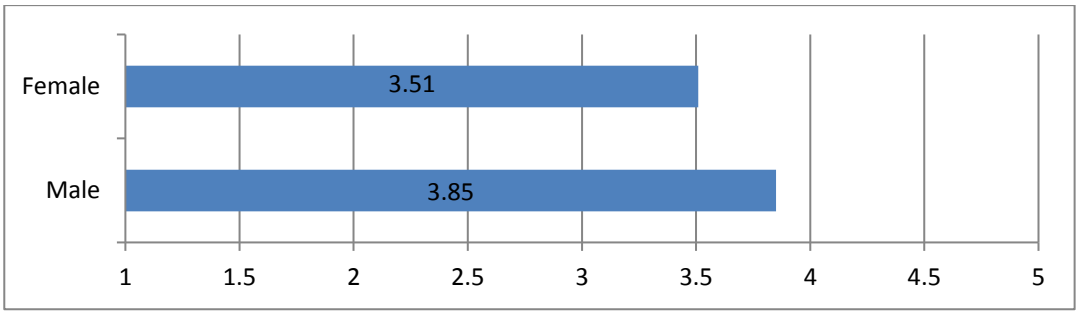

Figure 47. "To compete with others while playing games motives me." (Item 37)

The two previous items which were discussed above indicate that male participants are more in need of enjoyable activities and find CALL essential for their classrooms. This is probably due to their free time preferences when they generally play online games. Likewise, they are sick and tired overwhelming assignments and pen and pencil exercises which harm their concentration and participation. Hence, they believe that "*Teachers must benefit from computer more*." so that thanks to extra classroom activities along with their course books, there is hilarity and laughter in class.

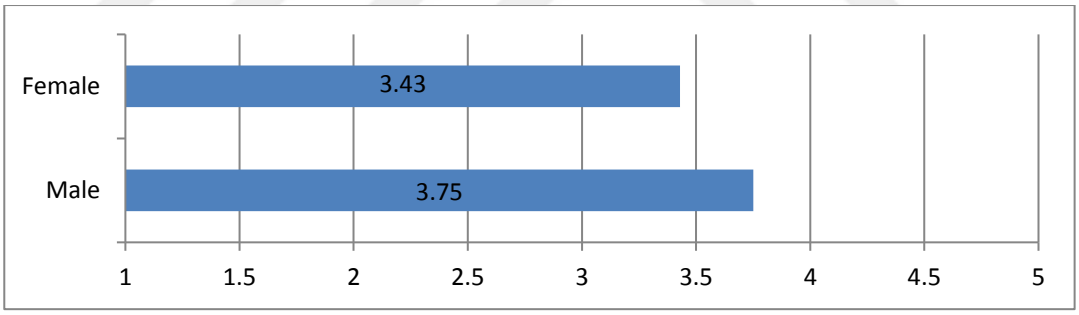

Figure 48. "Teachers must benefit from computer more." (Item 32)

4.3. Summary of Findings

The results of the study, which intends to gain insights into the minds of students about the effects of Computer Assisted Language Learning (CALL) and web based games, clearly show that students are proficient enough in computers and they all demand technology integrated education in their learning process. Especially, according to the outcomes of the data regarding computer use, which is observed high agreement level in all five related questions, the participants seem to keep up with the new millennium at least in terms of technical advancements, if not intellectually or academically.

One of the most important implications of the research is students' considerable and growing positive attitude towards games that are based on innovative ideas and instruments. All respondents, particularly male ones, are very eager to use technological equipment suitable for their ages and are not satisfied with the limited use of computers even though all required tools are at instructors' service and they have internet access in campus.

However, they do not show any desire to abandon present course materials and conventional tasks which they find subsidiary and necessary to survive in their further academic lives where they read and write in advanced English. Their positive perception on traditional types of instruction does not contradict the functional computerized backgrounds for every area of training from language management systems to web-based games. It was understood from the findings that participants crave for a little amusement of which computers and smartphones are important components.

Moreover, the results of the study revealed that there is a correlation between students' motivation and web-based games which are indicated as stress-free educational setting provider and a vital factor that determines these children's approach to not only language or lessons but also school. Besides, since one of the major obstacle on which students complain about is the lack of excitement in class activities, it is explored that participants find it exhilarant to compete with their peers without experiencing any fear.

Additionally, the findings suggest that whereas web games have an important role in contributing students' listening comprehension skills and word powers, these activities fall short to foster their reading, writing and speaking expertise. One of the major reasons is that teachers focus primarily on mechanical tests of the English grammar and vocabulary by duplicating supplementary resources and obviously they tend to neglect other areas. Also, it is almost unfeasible to create an interactive speaking activity due to these tools' nature which allows just one way communication.

In the light of the results, it is seen that these new means of practices must be expanded, and blended with course books in order to ensure the optimum profit of time and money which is spent by students, teachers and the state.

CHAPTER V: DISCUSSION AND CONCLUSION

5.1. Introduction

In this chapter, the findings that are based on measurable information gathered to examine students' perceptions on web-based and mobile assisted activities will be discussed in the light of the relevant literature. The chapter will also present the pedagogical implications, limitations, and suggestions for further studies.

5.2. Discussion of the Findings

This study aimed to establish an empirical link between formal curriculum and modern ways of education to accomplish more than the duty of teaching. Through a two-part questionnaire, it was aspired to find out foreign language learners' attitude towards computerized tutoring procedure, which is an ambitious effort to prove the correlation between modern tools and students' positive manner that exists in both genders.

Figure 3 clearly shows that according to İstanbul Sabahattin Zaim University Preparatory students, they are sufficiently capable in technology, which is an unwitting yet crucial element in the dissemination of adult roles in social and occupational terms. However, the data also confirm the general contention that a hybrid model, a combination of computer-assisted, and the long, well-established tradition of programmed instruction, is urgently required.

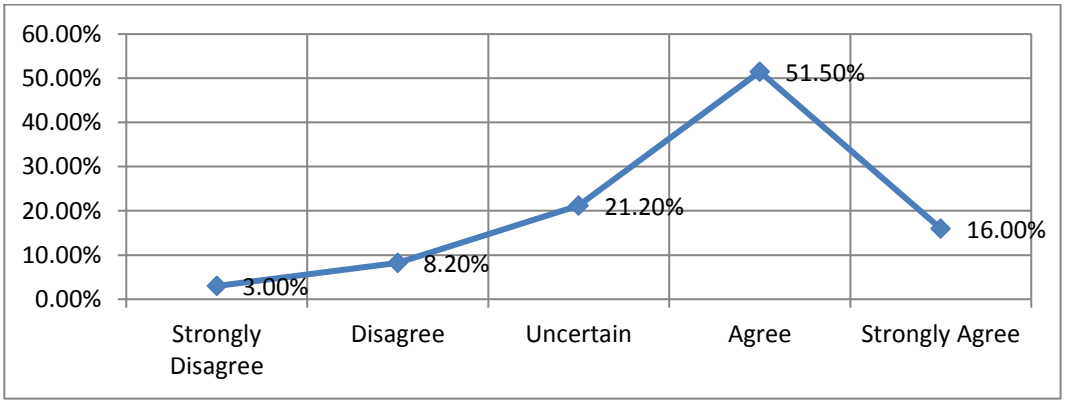

Figure 3. "I am good at using computers." (Item 1)

It is now widely recognized that one medium is not necessarily more effective than the other, yet, learners trust PCs in upgrading their internationalization and overcoming some obstacles while adopting a new language, which can be seen in

their level of agreement on the statements about computers' value of accelerating learning.

The results drawn from the data analysis of the second part of the questionnaire can be interpreted as recognition of change and commitment to some modernity measures, such as efficacy and futurism. In addition to their competence in computers, the general attitude level of students, which seems highly positive, towards web-based activities that is seen in Figure 8 heralds the representation of skilled members of urban-industrial society.

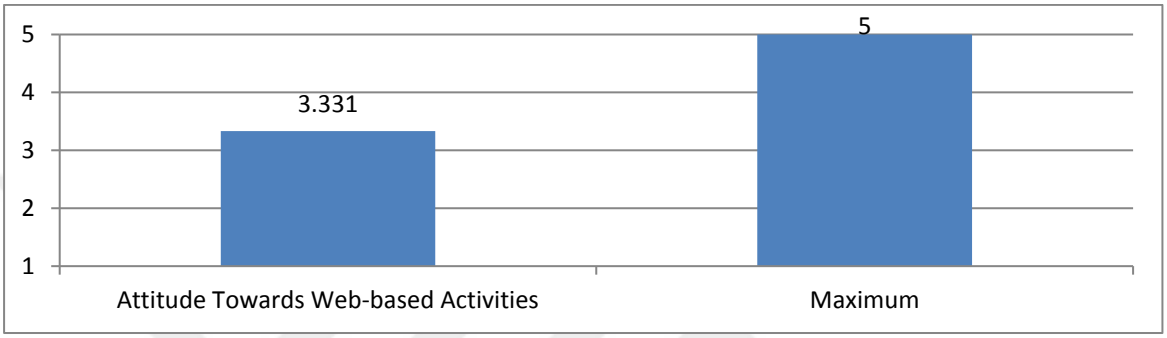

Figure 8. Attitude Level of Students Towards Web-based Activities

The loss of skilled labor could be avoided with the realization of fully trained individuals instead of examination oriented education system, which can only be achieved through renovation and decentralization. Correspondingly, an optimum level of efficiency in all reforms might be reached by long-term view of investing in people who have sharpened minds and improved understanding of modernity and society. In this sense, Figure 10 illustrates the students' content with CALL activities as those applications promote their practical, intellectual and pastime knowledge.

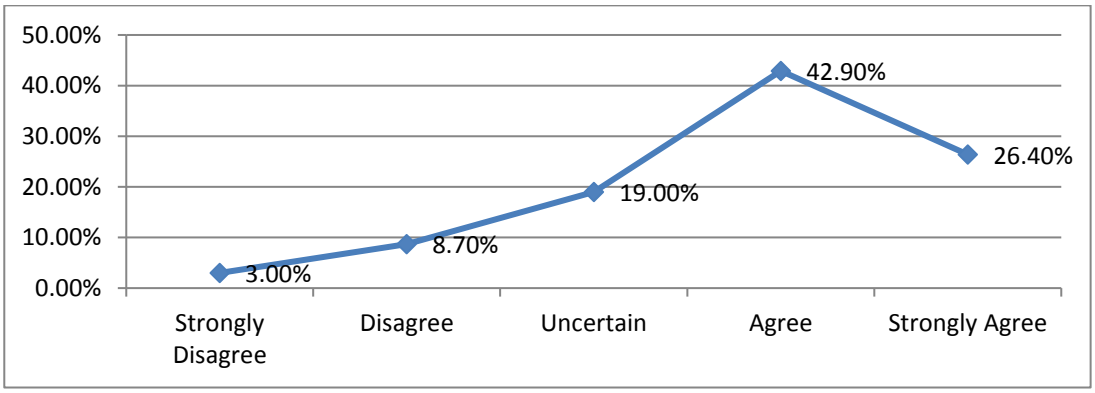

Figure 10. "These games promote my learning." (Item 7)

Besides, Figure 9 depicts that the consumers demand to create or disseminate knowledge of any type that fits their own agenda.

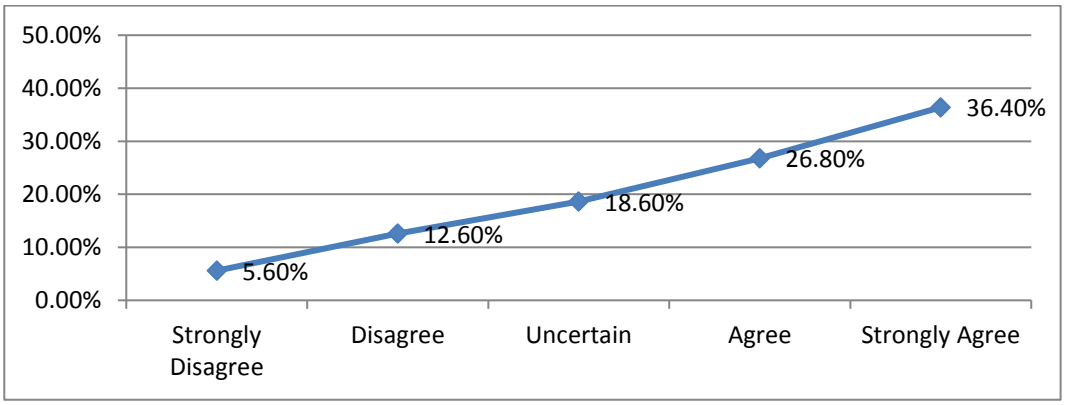

Figure 9. "I want to play web-based games more (Kahoot etc.)." (Item 6)

In a recent study by Dahil, Karabulut & Mutlu (2015) which investigates the reasons and results of absence of education technology in vocational and technical schools in Turkey sets forth the main obstacles. They note that a long-term and high-cost infrastructure is required to meet the expectations of the sector, and complain about student's lack of logical ability that will be the key to technologic integration. In the same article, it is pointed out that using computer technologies in teaching provides permanent learning, because of the opportunity to seize the necessary ability through practice, which is verified by perceptions of students that is portrayed in Figure 28.

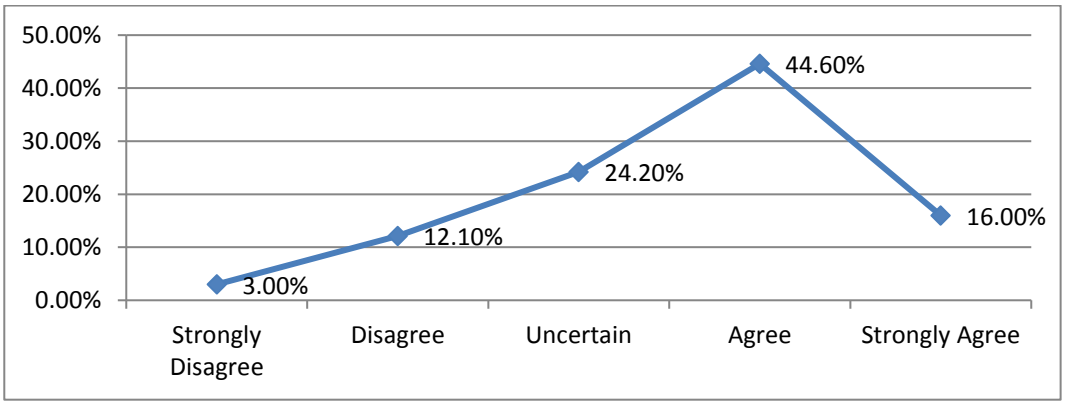

Figure 28. "Computer and games make learning permanent." (Item 25)

As a part of the interactive process, writing is the primary activity on various mobile interfaces where language can be highly creative, and show dynamic adaptations without instructor supervision. However, students show their displeasure with their responses (2,920 ± 1,170) to the statement of "*Web-based activities develop*

my writing skill.", which is the lowest level of agreement among the questions about skills.

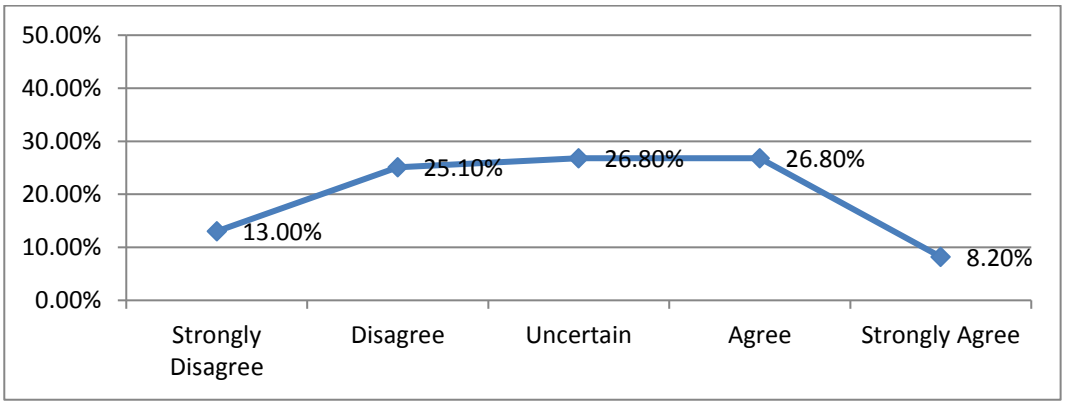

Figure 20. "Web-based activities develop my writing skill." (Item 17)

Similarly, Figure 21 illuminates that learners do not believe that web-based games make a significant difference in their oral performances. Therefore, teachers must be well aware of occasioning practices devoted to productive as well as receptive language skills, which will offer the highest rate of return.

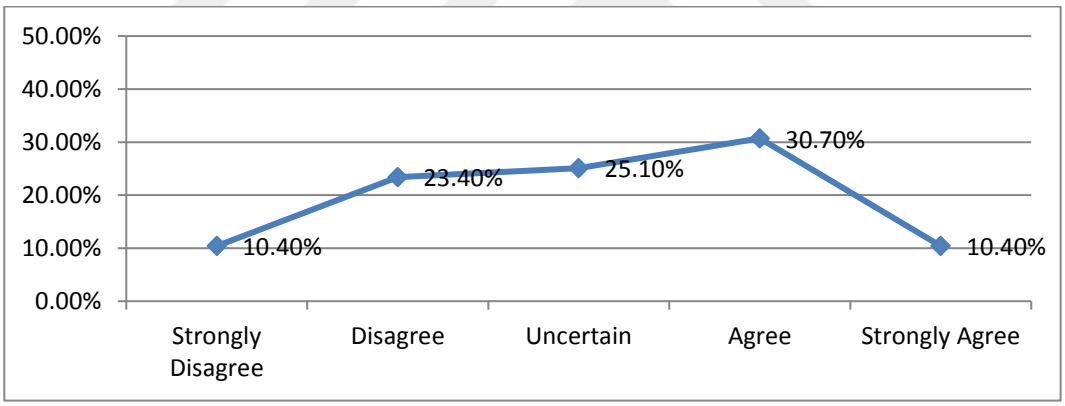

Figure 21. "Web-based activities develop my speaking skill." (Item 18)

Speaking of teachers, since they continue to dominate the educational process in all national and international context, Solak (2016) gives a few recommendations in his qualitative study where he compares the teacher training programs in Denmark, Sweden and Turkey through document analysis. It is proposed that profitability of education must be raised by encouraging candidates to have a master's degree, and identifying the concepts on culture to create more cultural awareness. Personally I believe that teacher requirements should also depend on higher-order thinking skills and technology-related procedural knowledge in several dimensions, which is fundamental to meet the measures of being a good instructor.

It is no secret that teacher characteristics are highly relevant to the student achievement. However, Figure 22 reveals that some educators, veteran staff in particular, still show reluctance to apply alternative sources of teaching supplies, and they even demoralize the newcomers for their endeavor at innovation.

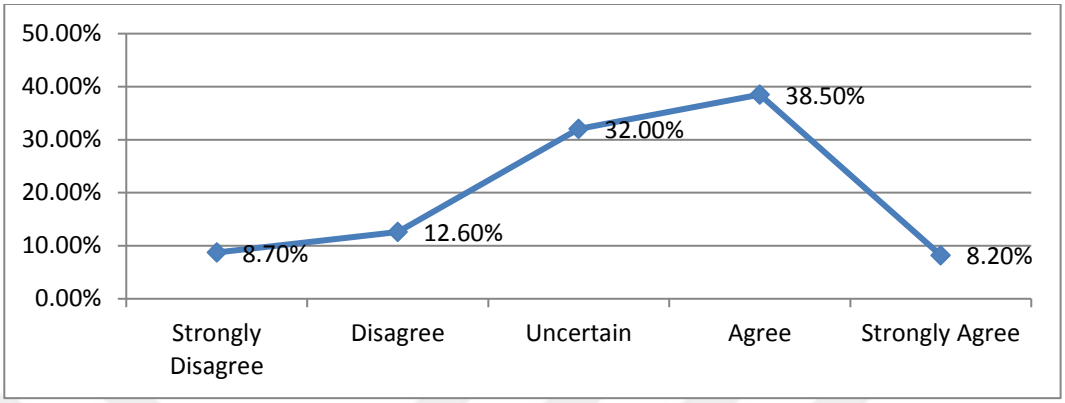

Figure 22. "My teachers find web-based activities favorable." (Item 19)

Yet, students request their teachers to embrace digital versatility that is gradually settling into the orbit of contemporary schooling with the ability to evolve, mature and develop its full potential, which is observed in Figure 29.

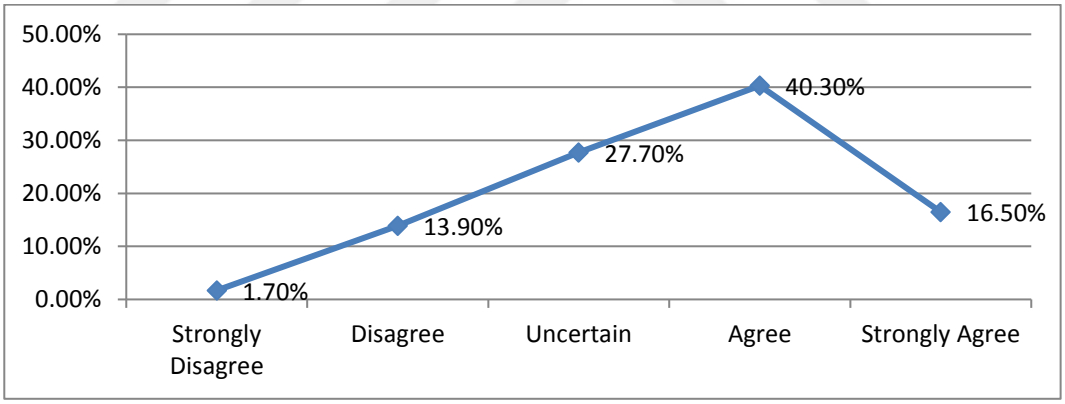

Figure 29. "Teachers must benefit from computers more." (Item 26)

Although no convincing empirical evidence has yet been given to the effectiveness question of video games as a companion to common methods, there is still little consensus on its outstanding contributions to sustained involvement and interpersonal relations of learners. Guillén-Nieto and Aleson-Carbonell (2012) experimented in their paper that the immersive, all-embracing learning environment generated significant differences between the results obtained in the pre-knowledge and post-knowledge tests as regards intercultural awareness and intercultural knowledge.

It is worth stating that a good number of studies have acknowledged the incidental benefits of commercial computer games and content that is primarily educational but also includes entertainment value. In explicating how "edutainment" came to the forefront among other streams of information, Item 6 (3,760 ± 1,227), which is "I want to play web-based games more (Kahoot etc.)", and Item 40 (2,540 ± 1,152), which is "These games have no impact on real life.", present data consistent with the literature.

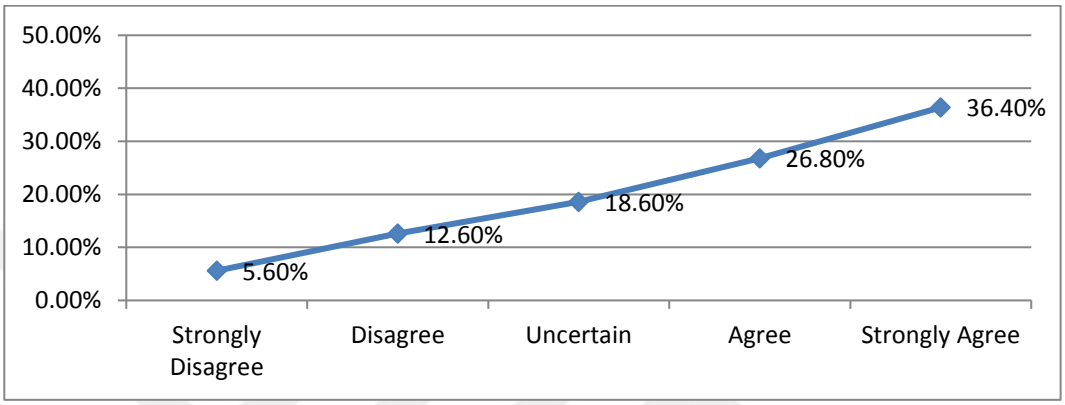

Figure 9. "I want to play web-based games more (Kahoot etc.)." (Item 6)

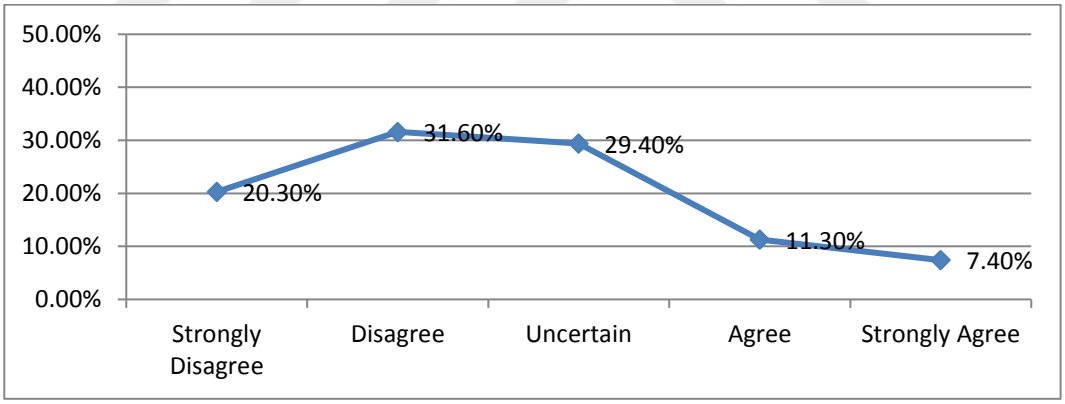

Figure 43. "These games have no impact on real life." (Item 40)

Competition offered by a growing array of games is the key distinguishing spark that is solving an extremely complex problem of creativity which is highly appreciated and occupies vast space in learning. Bearing bullying and victimization risks in mind, Figure 40 which is about the impact of competition on students' motivation, substantiates the claim that these formats turn players into committed and responsible members of "learning to learn club" while promising participation of them.

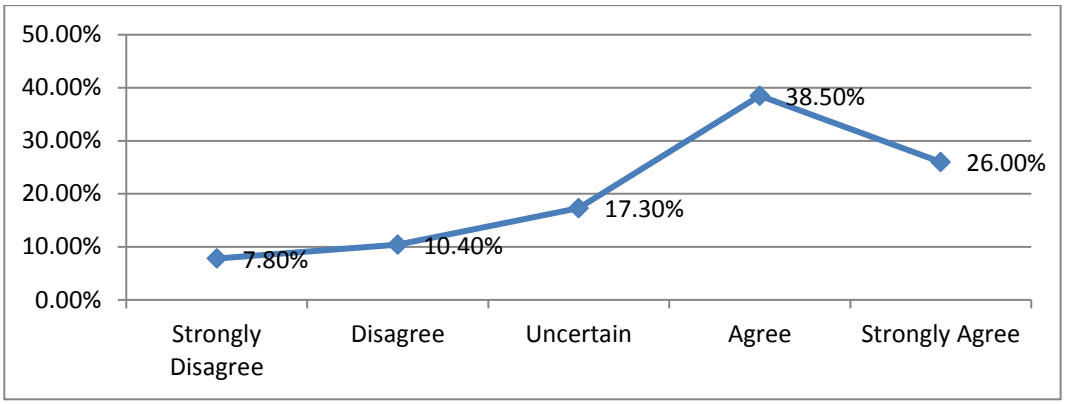

Figure 40. "To compete with others while playing games motives me." (Item 37)

According to Vatankhah & Tanbakooei (2014) the possibility of learners' inspirations to learn English can be traced back to the family support, or adequate cultural background, which are related to integrative motivation. All features of games also develop radically the personal attributes that determine a learner's productivity, such as innate abilities, cooperation and the last but not least, motivation. Over the past few decades a substantial body of research has focused on academic motivation to explore what might be associated with self-perceived needs and goals, and to support extrinsically motivated students.

Multiplayer games, involving challenges matched to the capacities of the contestants, provide satisfaction of competence and exhilaration of victory, which are the basic psychological needs of human beings.

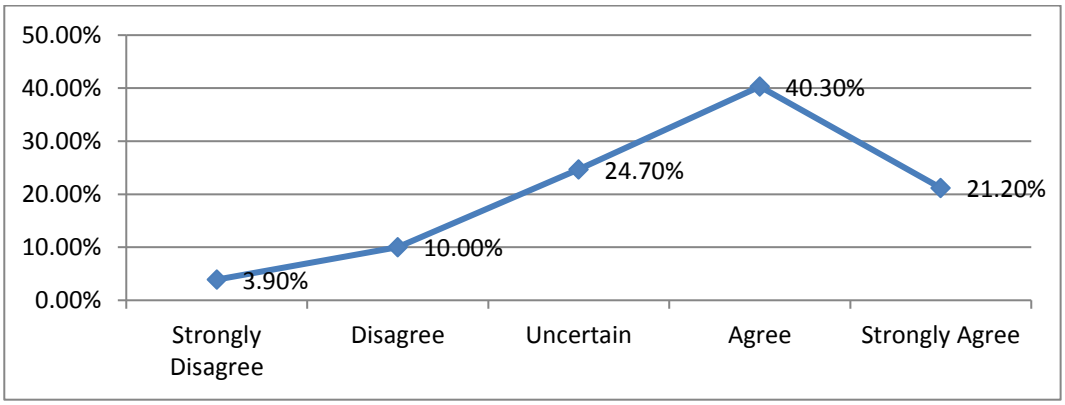

Figure 23. "Web-based activities have positive impact on my motivation." (Item 20)

Among 231 students who participated in our research only 32 students disagree with the statement of "Web-based activities have positive impact on my motivation.", which is in line with another previous study by Tüzün, Yılmaz-Soylu,

Karakuş, İnal & Kızılkaya (2009) who sum up that the game environment impact the motivation of students in a direction desired by most educators and parents.

Apart from those mentioned above, what is clear from Figure 33 is that students show no fear of failure or embarrassment while playing games, which make them less dependent on getting good scores that contaminates joyful classroom environment and a signal for disappointment.

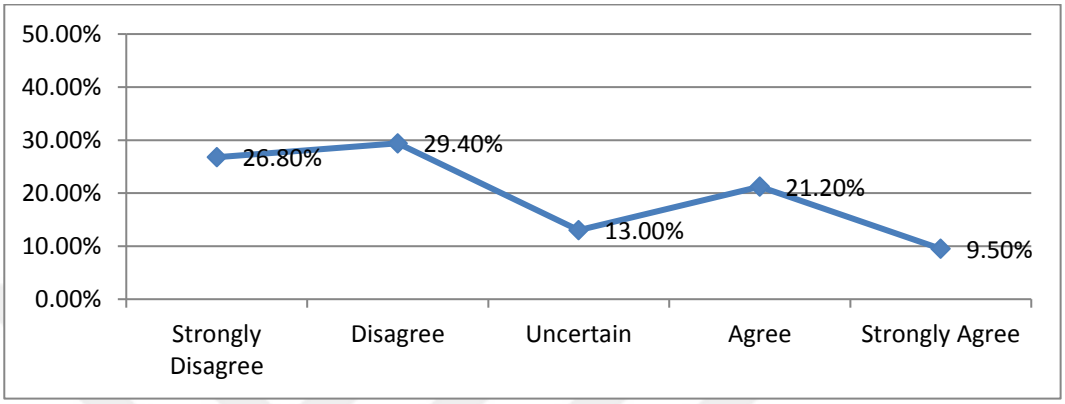

Figure 33. "I am scared to lose while playing games." (Item 30)

In addition to that, almost all the participants of this research hold the belief that "Web-based activities offer cheerful and stress-free atmosphere." (ITEM 14), which is in parallel to Korkmaz's findings (2013) who obtained positive results regarding learning English through games. For instance, 94,2 % of the learners highlighted that if games are played in a classroom, leisureliness could overcome anxiety.

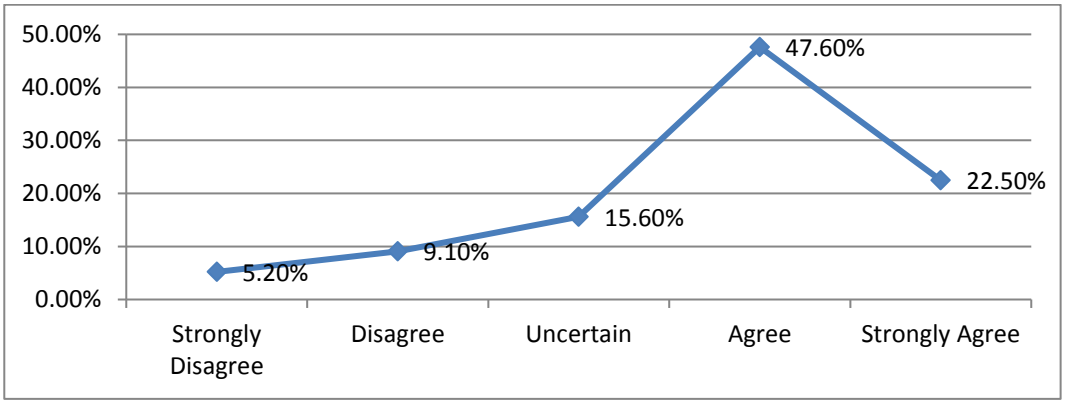

Figure 17. "Web-based activities offer a cheerful atmosphere." (Item 14)

Just as the setting or motivation is the crucial part of the body carrying certain values of a technology integrated class, so too is the feedback which leaves room for revision and reevaluation of knowledge on account of repetition and

obtained experience. Rossiter (2016) reports that feedback provided by academic members of staff is frequently criticized by students as insufficient even though evidence from a variety of sources suggests that ample comments and helpful contributions are made to students' work, which is sure to be futile due to student inactivity.

Feedback in-class online environments is a multifold process that comprises immediate response, and converges to full understanding by means of different parties, such as software, teacher and peers, whose reflection processes are relatively fast. The reviews in the literature endorse our argument that a good functioning learning cycle stems from subsequent evaluation that is both internal and external, which is evidently seen in Figure 38, "I get immediate feedback in web games.", where students give web game credit for its distinctive qualification on this matter.

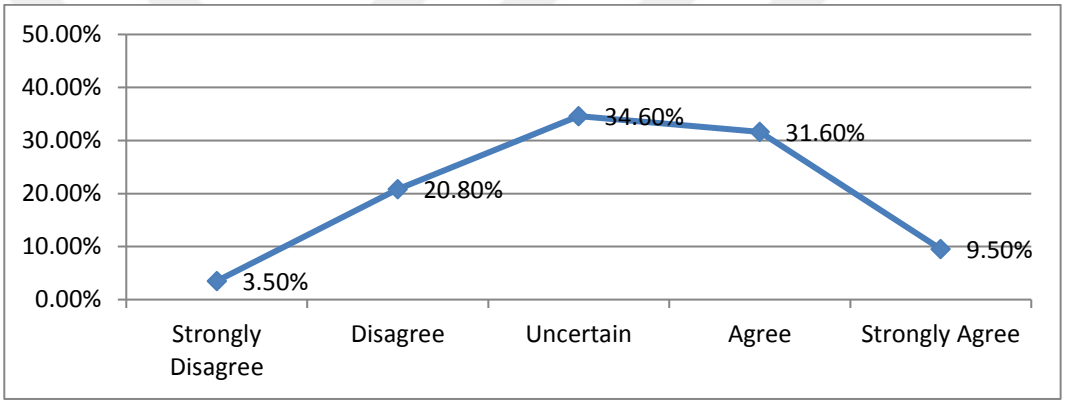

Figure 38. "I get immediate feedback in web games." (Item 35)

Findings from the results also support that after alternative technological forces became accessible to the overall population, the youth grasped and mastered new subjects and means fairly quickly, hence, they desire to deal with their own particular learning to meet vocational requirements through flexible links that is not only but significant variable affecting the definition of the modern pupil.

The digestion of portable devices has expanded the spread of information which appears in LMS framework of which instructive adequacy relies primarily on individual and organizational training goals by eliminating physical interaction. Although multiple studies cast considerable doubt on the claim that all students benefit from the affordances of these platforms, Figure 34 illustrates how our students attribute high rate of return as they are time and money saver.

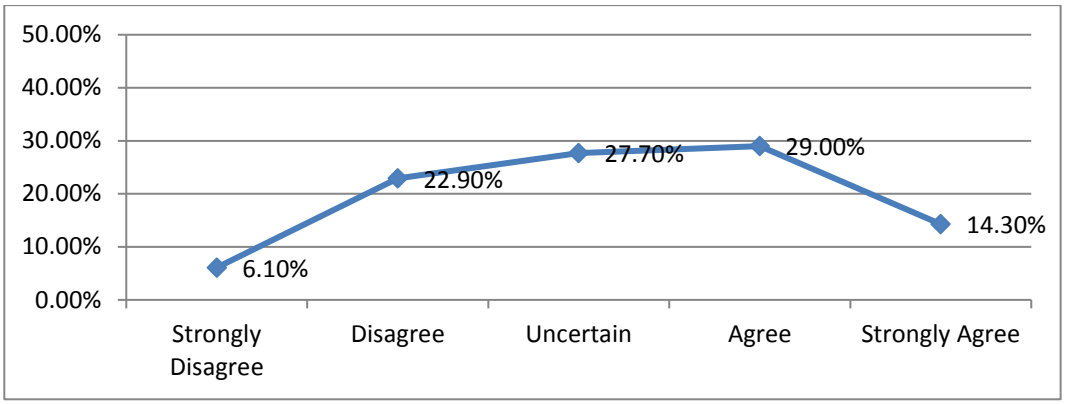

Figure 34. "LMS systems save money and time." (Item 31)

In the face of the latest social and international changes occurring throughout all parts of the world, developing a curriculum which includes prosperous factors that cover more than the usual textbook is an urgent need especially for developing countries. This belief is also reflected in Kırkgöz's article (2009) in which she describes all the steps of a program renewal project for a Turkish university, and places a noteworthy amount of importance on commitment to multi-dimensional needs analyses based on student and faculty requests.

Overwhelmingly, high occurrence of complaints regarding the lack of interesting content has been encountered in every educational context. Therefore, it is quite reasonable to expect that the participants approve more the statement of "There is too little that interests me in courses.", thus; agreement level (3,030 ± 1,166) seems to be contradictory to some degree.

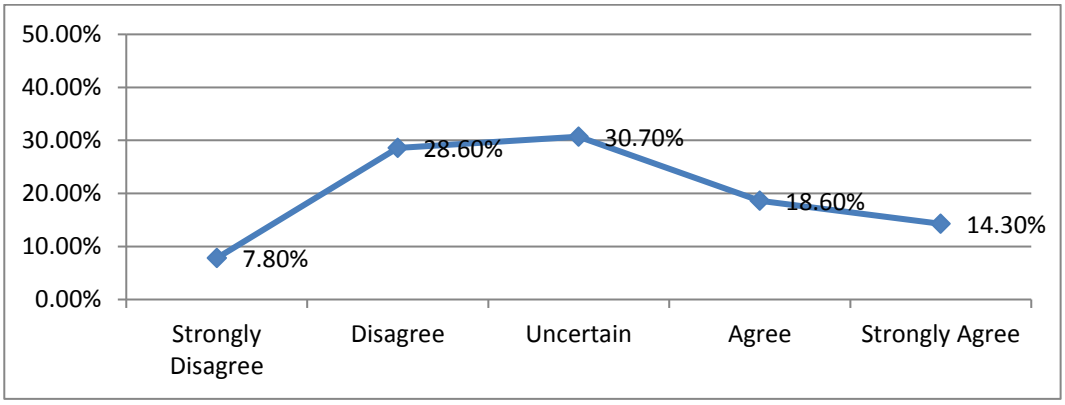

Figure 39. "There is too little that interests me in courses." (Item 36)

Today, the basic operative is still the use of textbooks of which preeminent value remains remarkable in helping teachers adapt national curriculum guidelines in most educational systems or institutions, which is obviously seeking to set rigid

standards. Several inquiries related to this issue impeach printed books for being prescriptive, which makes them most trustworthy implementer, and slighting of versatility which can be aided by varying media powers.

Contrary to Iranian high school students whose attitude towards their EFL textbooks were found out quite negative due to discrepancy between the content and learning objective (Rahimi & Hassani, 2012), it is heartening that by far our students prefer to make use of these traditional materials along with computer (4,130 ± 0,777), which depending upon a most likely theory that printed books serve sufficient preparation for success on students' exam-oriented goals.

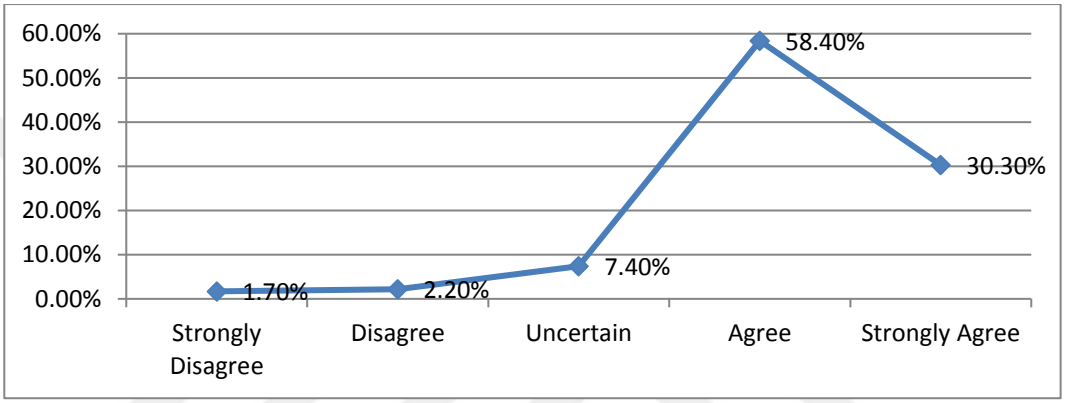

Figure 35. "Both computers and books must be used in class." (Item 32)

For those with an interest in discovering learning through textbooks, it seems that females are less liberated from traditional markers of instruction, which is the reason why they share the opinion of "Both computer and books must be used in class.", which is one of the two items on which agreement score of girls' is higher than their male counterparts'. Despite this extraordinary investment in gainful aspect of customary tool, they do not demonstrate any surrender to formal sector of education, and negate any access to technological opportunities.

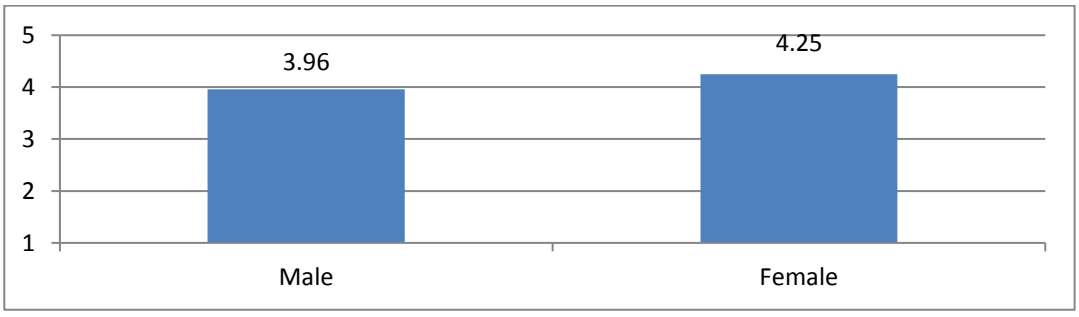

Figure 45. "Both computers and books must be used in class." (Item 21)

What we find in the current situation is that most students assert that schools can better serve for a greater diversity of needs and goals by transforming present controller of learning conditions to be grounded in practical application, which is automatically captured by young minds with fun.

5.3. Suggestions for Further Research

Despite the aforementioned restrictions that limit the scope and outcome of the research, the focus of this study is to interpret how students perceive the use of computers and web-based games by examining the opinions of users about the roles of these technologies on their learning. However, there are still numerous questions that must be addressed that may lead to better analyses and structure of this promising field.

First of all, as a next step, a different inquiry might be addressed to administrators and teachers in order to collect stimulating data on their concerns and demands. Additionally, meaningful statistics should be gathered to introduce or upkeep the development of educational technology in teacher training programs.

Secondly, positive or negative changes in students' feelings and knowledge level can be tested regularly to have a closer look at the whole picture, which result in a better insight as regards working with these tools might have a considerable effect on pupils' skills and emotions. In this respect, other studies could also be conducted with more students and CALL instruments, which have a potential to provide a wide-ranging and comprehensive review.

Moreover, for further research, human-to-human and human-to-machine interaction in a game experience is a suitable area to be investigated, and it could be interesting to observe how these activities are processed in the brain, which may offer a solid proof to the ones who approach this field with suspicion, and hopefully assure them that there is nothing to be afraid of diversity.

Last but not least, creators of these software programs and web pages are worth of a study to embark a sustained and constantly-developing relationship among all entities.

5.5 Conclusion

There is much early work into the CALL field, however, the current study expected to acquire concrete evidence on impacts of online exercises on students' attitude while integrating up-to-date literature review into the research. The foremost empirical question was to what extent do these practices lead to a positive manner in

students with regard to some main factors, such as four basic skills, motivation, permanent learning, classroom environment and feedback.

The main purpose of this case study was to determine some feasible solutions to fundamental issues presently faced in English teaching in Turkey, a country which ranks very low on various measures of foreign language. This failure entails reforms that are appropriate for different intelligences, which ensure students' engagement and well-being to establish a contemporary industrial society.

With regard to this objective, the findings suggest that long-term and aggregative measures must be taken to provide quality assurance in socio-economic area by giving way to wide popularization of the technology, which has become more and more vital of serious efforts of governments especially in developing countries.

As an advocate of investments in computerized activities for not only language classrooms but also for all branches of learning, this project intends to inform and encourage teacher candidates to be willing to embrace and broaden this notion of change. Because in its absence, while students are under the influence of massive technological attack, it is not reasonable to make learners, who come across serious problems in communicating satisfactorily even in their mother tongue, consume any kind of instruction with desired motivation, which is verified by more than one result of the questionnaire.

Perhaps the most important conclusion derived from the findings and related literature is to create a reciprocal bond between the content of the formal curriculum despite its counter-productive impairments and appealing high-tech reinforcements to resolve this eternal dilemma.

BIBLIOGRAPHY

Abdi, R. (2013). The effect of using hypertext materials on reading comprehension ability of EFL learners. *Procedia-Social and Behavioral Sciences*, *83*, 557-562.

Akman, I., Yazici, A., Mishra, A., & Arifoglu, A. (2005). E-Government: A global view and an empirical evaluation of some attributes of citizens. *Government Information Quarterly*, *22*(2), 239-257.

Alptekin, M. (1984). The question of culture: EFL teaching in non-English-speaking countries. *ELT journal*, *38*(1), 14-20.

Altbach, P. G. (1987). Textbooks in comparative context. *Educational Technology—Its Creation, Development and Cross-Cultural Transfer*, *159*.

Altinay, Z., Yikici, B., Debes, G., Deviren, Y., & Altinay, F. (2016). Information Communication Technologies in Education for Developing Countries. In *ICT in Education in Global Context* (pp. 145-170). Springer Singapore.

Altun, S. A., & Ilgaz, H. (2016). A Qualitative Case Study of Tablet Use in a High School in Turkey. In *ICT in Education in Global Context* (pp. 37-51). Springer Singapore.

Altundiş, E. (2006). Ingilizce öğretmenlerinin eğitimsel kökenleri ve dil öğretiminde karşılaştıkları sorunlar (Kayseri ili örneği). *Unpublished master's dissertation, Erciyes University, Kayseri*.

Anchimbe, E. A. (2009). Local or international standards: Indigenized varieties of English at the crossroads. *English as an International*, 271.

Andujar, A. (2016). Benefits of mobile instant messaging to develop ESL writing. *System*, *62*, 63-76.

Appadurai, A. (2001). Globalization. Durham.

Aşkar, P., Altun, A., Şimşek, N., & Özdemir, S. (2016). How Teachers and Students Depict Interactive Whiteboards and Tablet PCs in a 9th Grade Classroom?. In *ICT in Education in Global Context* (pp. 19-35). Springer Singapore.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.

Bebell, D., Russell, M., & O'Dwyer, L. (2004). Measuring teachers' technology uses: Why multiple-measures are more revealing. *Journal of Research on Technology in Education*, *37*(1), 45-63.

Berk, R. A. (2009). Multimedia teaching with video clips: TV, movies, YouTube, and mtvU in the college classroom. *International Journal of Technology in Teaching and Learning*, *5*(1), 1-21.

Blake, R. J. (2013). *Brave new digital classroom: Technology and foreign language learning*. Georgetown University Press.

Bodomo, A. B. (2010) Educational Technologies (WebCT): Creating Constructivist and Interactive Learning Communities.

Broughton, G., Brumfit, C., Pincas, A., & Wilde, R. D. (2002). *Teaching English as a foreign language*. Routledge.

Brown, I., Campbell, A. P., & Weatherford, Y. (2008). Using DynEd and ALC with low-level university freshmen. *The JALT CALL Journal*, *4*(3), 37-53.

Bull, J., & McKenna, C. (2004). *A blueprint for computer-assisted assessment*. Routledge.

Candlin, C., & Beatty, K. (2003). Teaching and researching computer-assisted language learning.

Chan, W. M., Chi, S. W., Chin, K. N., & Lin, C. Y. (2011). Students' perceptions of and attitudes towards podcast-based learning: A comparison of two language podcast projects. Electronic Journal of Foreign Language Teaching, 8(1), 312-335.

Chen, N. S., Cheng, I. L., & Chew, S. W. (2016). Evolution Is not enough: Revolutionizing Current Learning Environments to Smart Learning Environments. *International Journal of Artificial Intelligence in Education*, *26*(2), 561-581.

Chen, C. H., & Law, V. (2016). Scaffolding individual and collaborative game-based learning in learning performance and intrinsic motivation. *Computers in Human Behavior*, *55*, 1201-1212.

Chen, Y. C., Yeh, R. C., Lou, S. J., & Lin, Y. C. (2013). What Drives a Successful Web-Based Language Learning Environment? An Empirical Investigation of the Critical Factors Influencing College Students' Learning Satisfaction. *Procedia-Social and Behavioral Sciences*, *103*, 1327-1336.

Cheng, M. T., Lin, Y. W., & She, H. C. (2015). Learning through playing Virtual Age: Exploring the interactions among student concept learning, gaming performance, in-game behaviors, and the use of in-game characters. *Computers & Education*, *86*, 18-29.

Crystal, D. (1997). English as a global language. Cambridge: Cambridge University Press.

Dahil, L., Karabulut, A., & Mutlu, İ. (2015). Reasons and Results of Nonapplicability of Education Technology in Vocational and Technical Schools in Turkey. *Procedia-Social and Behavioral Sciences*, *176*, 811-818.

Demircan, Ö. (2001). Dünden bugüne Türkiye'de yabancı dil. *İstanbul: Remzi Yayınevi*.

Dermo, J. (2009). e-Assessment and the student learning experience: A survey of student perceptions of e-assessment. *British Journal of Educational Technology*, *40*(2), 203-214.

Doğan, D., Çınar, M., & Seferoğlu, S. S. "Her Çocuğa Bir Bilgisayar" Projeleri ve FATİH Projesi: Karşılaştırmalı Bir Değerlendirme" One Laptop per Child" Projects and FATIH Project: A Comparative Examination. *Studies*, *3*(1), 1-26.

Döngel, A. (2011, April). Dyned; Bilgisayar Destekli İngilizce Programının İlköğretim İngilizce Dersi Öğretim Programlarına Uygunluğu Yönünden İçerik Analizi (5. Sınıf Örneği). In *2nd International Conference on New Trends in Education and Their Implications* (pp. 27-29).

Edmunds, R., Thorpe, M., & Conole, G. (2012). Student attitudes towards and use of ICT in course study, work and social activity: A technology acceptance model approach. *British journal of educational technology*, *43*(1), 71-84.

Evans, M. (2009). Digital technology and language learning: a review of policy and research evidence. *Foreign language learning with digital technology*, 7-31.

Gaynor, B. (2014). From language policy to pedagogic practice: Elementary school English in Japan. In *International perspectives on teaching English to young learners* (pp. 66-84). Palgrave Macmillan UK.

Glewwe, P., & Kremer, M. (2006). Schools, teachers, and education outcomes in developing countries. *Handbook of the Economics of Education*, *2*, 945-1017.

Gollin-Kies, S., Hall, D. R., & Moore, S. H. (2015). Key Trends Affecting Learning, Teaching and Researching LSP. In *Language for Specific Purposes* (pp. 29-50). Palgrave Macmillan UK.

Gorjian, B. (2012). Teaching vocabulary through web-based language learning (WBLL) approach. *Procedia Technology*, *1*, 334-339.

Guillén-Nieto, V., & Aleson-Carbonell, M. (2012). Serious games and learning effectiveness: The case of It'sa Deal!. *Computers & Education*, *58*(1), 435-448.

Hashemi, M., & Aziznezhad, M. (2011). Computer Assisted Language Learning Freedom or Submission to Machines?. *Procedia-Social and Behavioral Sciences*, *28*, 832-835.

Harris, J. (2002). Wherefore art thou, telecollaboration?. *Learning and Leading with Technology*, *29*(6), 54-59.

Hémard, D. (2006). Evaluating hypermedia structures as a means of improving language learning strategies and motivation. *ReCALL*, *18*(01), 24-44.

Hubbard, P. (1992). A methodological framework for CALL courseware development. *Computers in applied linguistics: An international perspective*, 39-65.

Ilomäki, L., Paavola, S., Lakkala, M., & Kantosalo, A. (2016). Digital competence–an emergent boundary concept for policy and educational research. *Education and Information Technologies*, *21*(3), 655-679.

Jenkins, J. (2000). *The phonology of English as an international language*. Oxford University Press.

Kachru, B. (1985). Standards, codification and sociolinguistic realism: The English language in the outer circle. Cited in Gupta, A. 2001. Realism and imagination in the teaching of English. *World Englishes*, *20*(3), 365-381.

Kachru, B., Nelson, CL (1996). *World Englishes. In S. McKay*, *8*.

Kamberi, L. (2013). Computer assisted versus classroom instruction: the big dilemma-revised. *Procedia-Social and Behavioral Sciences*, *70*, 1691-1695.

Karaman, S., Özen, Ü., & Yıldırım, S. (2010). Öğrenme nesnelerinin pedagojik boyutu ve öğretim ortamlarına kaynaştırılması. *Eğitim ve Bilim*, *32*(145), 3-15.

Keane, T., Keane, W. F., & Blicblau, A. S. (2016). Beyond traditional literacy: Learning and transformative practices using ICT. *Education and Information Technologies*, *21*(4), 769-781.

Kessel, V. N. (2005). ICT Education Monitor: Eight years of ICT in schools. *Netherlands: Ministry of Education, Culture and Science*.

Kiili, K. (2005). Digital game-based learning: Towards an experiential gaming model. *The Internet and higher education*, *8*(1), 13-24.

Kırkgoz, Y. (2005). English language teaching in Turkey: Challenges for the 21st century. *Teaching English to the world: History, curriculum, and practice*, 159-175.

Kırkgöz, Y. (2009). The challenge of developing and maintaining curriculum innovation at higher education. *Procedia-Social and Behavioral Sciences*, *1*(1), 73-78.

Korkmaz, Ş. Ç. (2013). Language games as a part of edutainment. *Procedia-Social and Behavioral Sciences*, *93*, 1249-1253.

Korte, W. B., & Hüsing, T. (2006). Benchmarking access and use of ICT in European schools 2006: Results from Head Teacher and A Classroom Teacher Surveys in 27 European countries. *empirica*, *1*, 0.

Kozol, J. (2005). *The shame of the nation: The restoration of apartheid schooling in America*. Broadway Books.

Kumaravadivelu, B. (2006). Dangerous liaison: Globalization, empire and TESOL. In *(Re-) locating TESOL in an age of empire* (pp. 1-26). Palgrave Macmillan UK.

Küçükoğlu, B. (2013). The history of foreign language policies in Turkey. *Procedia-Social and Behavioral Sciences*, *70*, 1090-1094.

Li, L. Y., Tseng, S. T., & Chen, G. D. (2016). Effect of hypertext highlighting on browsing, reading, and navigational performance. *Computers in Human Behavior*, *54*, 318-325.

Malinina, I. (2015). ICT Competencies of Foreign Languages Teachers. *Procedia-Social and Behavioral Sciences*, *182*, 75-80.

Marinagi, C., Skourlas, C., & Belsis, P. (2013). Employing ubiquitous computing devices and technologies in the higher education classroom of the future. *Procedia-Social and Behavioral Sciences*, *73*, 487-494.

Masino, S., & Niño-Zarazúa, M. (2016). What works to improve the quality of student learning in developing countries?. *International Journal of Educational Development*, *48*, 53-65.

MEB. (2015). Fatih Project. Retrieved June, 2016 from http://fatihprojesi.meb.gov.tr/tr/english.php

Meierhenry, W. C. (1966). Innovation, education, and media. *AV communication review*, *14*(4), 451-465.

Murray, D. E. (2000). Protean1 Communication: The Language of Computer-Mediated Communication. *TESOL quarterly*, *34*(3), 397-421.

Mahmud, M. M., Ramachandiran, C. R., & Ismail, O. (2015). YouTube and English Literature: Beyond the Chalk and Board. In *Taylor's 7th Teaching and Learning Conference 2014 Proceedings* (pp. 279-293). Springer Singapore.

Newman, R., Chang, V., Walters, R. J., & Wills, G. B. (2016). Web 2.0—The past and the future. *International Journal of Information Management*, *36*(4), 591-598.

Nikou, S. A., & Economides, A. A. (2016). The impact of paper-based, computer-based and mobile-based self-assessment on students' science motivation and achievement. *Computers in Human Behavior*, *55*, 1241-1248.

Nunan, D. (2010). Technology Supports for Second Language Learning, *International Encyclopedia of Education (3rd ed., Vol. 8, pp. 204-209).* Oxford: Elsevier.

Orivel, F. (1987). Educational technology. *Psacharopoulos G (ed.)*.

Örnek, A. S., & Danyal, Y. (2015). Increased Importance of Entrepreneurship from Entrepreneurship to Techno-Entrepreneurship (Startup): Provided Supports and Conveniences to Techno-Entrepreneurs in Turkey. *Procedia-Social and Behavioral Sciences*, *195*, 1146-1155.

Özar, M., & Aşkar, P. (1997). Present and future prospects of the use of information technology in schools in Turkey. *Educational Technology Research and Development*, *45*(2), 117-124.

Paraskeva, F., Bouta, H., & Papagianni, A. (2008). Individual characteristics and computer self-efficacy in secondary education teachers to integrate technology in educational practice. *Computers & Education*, *50*(3), 1084-1091.

Park, J. S. Y., & Wee, L. (2009). The three circles redux: A market–theoretic perspective on World Englishes. *Applied Linguistics*, *30*(3), 389-406.

Pennington, M. C. (1996). *The power of CALL*. Athelstan.

Pennington, M. C., & Stevens, V. (1992). *Computers in Applied Linguistics: An International Perspective. Multilingual Matters 75*. Multilingual Matters, 1900 Frost Road, Suite 101, Bristol, PA 19007.

Poolsawad, K., Kanjanawasee, S., & Wudthayagorn, J. (2015). Development of an English Communicative Competence Diagnostic Approach. *Procedia-Social and Behavioral Sciences*, *191*, 759-763.

Pouezevara, S., Dinçer, A., Kipp, S., & Sarışık, Y. (2013). Turkey's FATIH project: A plan to conquer the digital divide or a technological leap of faith. *Turkey: RTI International & Education Reform Initiative (ERI)*.

Puentedura, R. (2011). Metaphors, models, and flows: Elements for a cartography of technology in learning. Retrieved April, 2016.

Rahimi, M., & Hassani, M. (2012). Attitude towards EFL textbooks as a predictor of attitude towards learning English as a foreign language. *Procedia-Social and Behavioral Sciences*, *31*, 66-72.

Rezvani, E., & Ketabi, S. (2011). On the effectiveness of using web-and print-based materials in teaching grammar to Iranian EFL learners. *Procedia-Social and Behavioral Sciences*, *15*, 376-381.

Rossiter, J. A. (2016). Using an understanding of feedback processes to improve student learning. *IFAC-PapersOnLine*, *49*(6), 57-62.

Sampath, K. (1984). *Introduction to educational technology*. Sterling Publishers Pvt. Ltd.

Sarfraz, S., Mansoor, Z., & Tariq, R. (2015). Teachers' and students' perceptions of the communicative language teaching methodology in the CALL environment: A case study. *Procedia-Social and Behavioral Sciences*, *199*, 730-736.

Saricoban, G. (2012). Foreign language education policies in Turkey. *Procedia-Social and Behavioral Sciences*, *46*, 2643-2648.

Saviotti, P. P., & Pyka, A. (2004). Economic development, qualitative change and employment creation. *Structural Change and Economic Dynamics*, *15*(3), 265-287.

Serrano-Cámara, L. M., Paredes-Velasco, M., Alcover, C. M., & Velazquez-Iturbide, J. Á. (2014). An evaluation of students' motivation in computer-supported collaborative learning of programming concepts. *Computers in Human Behavior*, *31*, 499-508.

Sheldon, L. E. (1988). Evaluating ELT textbooks and materials. *ELT journal*, *42*(4), 237-246.

Silber, K. H. (1981). Some implications of the history of educational technology: We're all in this together. *Educational media yearbook*.

Sokolova, E. Y., Golovacheva, E. A., & Chernaya, A. A. (2015). Professionally-Oriented Communicative Language Teaching Approach by the Design of a Computer Assisted ESP Course: Analysis of Results. *Procedia-Social and Behavioral Sciences*, *215*, 191-195.

Solak, E. (2016). English Teacher Training Programs in Denmark, Sweden and Turkey. *Procedia-Social and Behavioral Sciences*, *232*, 439-443.

State Planning Organization (SPO) (2006). Information Society Strategy (2006-2010). Ankara:State Planning Organization. Retrieved June, 2016 from http://www.bilgitoplumu.gov.tr/Documents/5/Documents/060700_InformationSocietyStrategy.pdf

Stockwell, G. (2013). Technology and motivation in English-language teaching and learning. In *International Perspectives on Motivation* (pp. 156-175). Palgrave Macmillan UK.

Stošić, L. (2015). The importance of educational technology in teaching. *International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE)*, *3*(1), 111-114.

Stödberg, U. (2012). A research review of e-assessment. *Assessment & Evaluation in Higher Education*, *37*(5), 591-604.

Tekinalp, Ş., & Ruhdan, U. (2009). İletişim Araçları ve Kuramları, 3. *Baskı, İstanbul: Beta Yayınları*.

Tepe, S., & Zaim, A. H. (2016). Türkiye ve dünyada teknopark uygulamaları: Teknopark İstanbul Örneği.

Thomas, R. M., & Kobayashi, V. N. (Eds.). (2014). *Educational technology-Its creation, development and cross-cultural transfer*. Elsevier.

Tunçok, B. (2010). Case Study: Students' Attitudes towards Computer Assisted Learning. *Computer Assisted Language Learning and Foreign Language Learning. Retrieved from Middle East Technical University, Dissertation*.

Tüzün, H., Yılmaz-Soylu, M., Karakuş, T., İnal, Y., & Kızılkaya, G. (2009). The effects of computer games on primary school students' achievement and motivation in geography learning. *Computers & Education*, *52*(1), 68-77.

Vatankhah, M., & Tanbakooei, N. (2014). The role of social support on intrinsic and extrinsic motivation among Iranian EFL learners. *Procedia-Social and Behavioral Sciences*, *98*, 1912-1918.

Walther, J. B., Hoter, E., Ganayem, A., & Shonfeld, M. (2015). Computer-mediated communication and the reduction of prejudice: A controlled longitudinal field experiment among Jews and Arabs in Israel. *Computers in Human Behavior*, *52*, 550-558.

Wang, J. Y., Wu, H. K., & Hsu, Y. S. (2017). Using mobile applications for learning: Effects of simulation design, visual-motor integration, and spatial ability on high school students' conceptual understanding. *Computers in Human Behavior*, *66*, 103-113.

Wang, A. I. (2015). The wear out effect of a game-based student response system. *Computers & Education*, *82*, 217-227.

Warschauer, M. (1996). Computer-assisted language learning: An introduction. *Multimedia language teaching*, 3-20.

Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language teaching*, *31*(02), 57-71.

Warschauer, M., Shetzer, H., & Meloni, C. F. (2000). *Internet for English teaching* (p. 7). Alexandria,, Virginia: Tesol.

Watty, K., McKay, J., & Ngo, L. (2016). Innovators or inhibitors? Accounting faculty resistance to new educational technologies in higher education. *Journal of Accounting Education*.

Westbury, I. (1985). Textbooks, history of. *Torsten Husen & T. Neville Postlethwaite, International Encyclopedia of Education, 9*.

Whorf, B. L., Carroll, J. B., Levinson, S. C., & Lee, P. (2012). *Language, thought, and reality: Selected writings of Benjamin Lee Whorf*. Mit Press.

Yaghoobi, M., & Razmjoo, S. A. (2016). The potentiality of computer-assisted instruction towards ameliorating Iranian EFL learners' reading level. *Computers in Human Behavior*, *59*, 108-114.

Yanuschik, O. V., Pakhomova, E. G., & Batbold, K. (2015). E-learning as a way to improve the quality of educational for international students. *Procedia-Social and Behavioral Sciences*, *215*, 147-155.

Yemini, M., & Cohen, A. (2016). School websites as a novel internationalization assessment tool. *Education and Information Technologies*, *21*(3), 607-623.

Zhuang, J. I. A. Y. I. N. G., & Thomas, M. (1987). Computer technology transfer to developing societies: a Chinese-language case. *Educational Technology: Its Creation, Development and Cross-Cultural Transfer*, 65-89.

APPENDIX 1

THE QUESTIONNAIRE

SEX: AGE:	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I am good at using a computer.					
2. Computers speed up my learning.					
3. I like using computers.					
4. I like learning new things through computers					
5. English can be learnt better by a computer.					
6. I want to play web-based games more (Kahoot etc.).					
7. These games promote my learning.					
8. Games must be used in all courses.					
9. The more we play games, the more I want to come to school.					
10. To practice is more useful than playing games.					

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
11. Traditional methods are more effective than CALL.					
12. The classes which play Kahoot are more successful.					
13. We can learn English by just playing games.					
14. Web-based activities offer a cheerful and stress-free atmosphere.					
15. Web-based activities develop my listening skill.					
16. Web-based activities develop my reading skill.					
17. Web-based activities develop my writing skill.					
18. Web-based activities develop my speaking skill.					
19. My teachers find web-based activities favorable.					
20. Web-based activities have positive impact on my motivation.					

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
21. CALL is not as effective as traditional teaching.					
22. Web-based activities develop my vocabulary.					
23. I think games like Kahoot are a waste of time.					
24. Web-based activities give opportunity to practice.					
25. Computers and games make learning permanent.					
26. Teachers must benefit from computer more.					
27. I prefer web-based activities to do things by hand.					
28. I find these games childish.					
29. We had better do questions rather than play games					
30. I am scared to loose while playing games.					
31. LMS systems save money and time.					

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
32. Both computers and books must be used in class.					
33. I find web-based activities confusing.					
34. I always have internet access at school.					
35. I get immediate feedback in web games.					
36. There is too little that interests me in courses.					
37. To compete with others while playing games motives me.					
38. I like to use authentic materials in class.					
39. It is impossible to be unsuccessful if we follow the book.					
40. These games have no impact on real life.					