

**REPUBLIC OF TURKEY
ÇUKUROVA UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
ENGLISH LANGUAGE TEACHING DEPARTMENT**

**AN INVESTIGATION INTO EFL TEACHERS' SELF-EFFICACY BELIEFS,
FREQUENCY OF USE AND ATTITUDES TOWARDS WEB 2.0 TOOLS**

Eyyüp YAPRAK

MASTER OF ARTS

ADANA / 2020

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MASTER OF ARTS

ADANA / 2020

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ÖZET

İNGİLİZCE ÖĞRETMENLERİNİN WEB 2.0 ARAÇLARININ İNGİLİZCE ÖĞRETİMİNE ENTEGRASYONUNA YÖNELİK ÖZ YETERLİLİK İNANCI, KULLANIM SIKLIĞI İLE TUTUMLARI ÜZERİNE ÇALIŞMA

Eyyüp YAPRAK

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Mesafelerin hızla yaklaştığı ve kültürlerin her zamankinden daha fazla kesiştiği bir dünyada, bir yabancı dilin, özellikle de evrensel bir dilin gerekliliği yadsınamaz bir gerçektir. Ülkeler arasındaki ekonomik, politik, kültürel ve sosyolojik ilişkiler artık geçmişe göre daha güçlü ve daha önemlidir. İnternetin ve beraberindeki Web 2.0 teknolojilerinin yaygın kullanımı son yıllarda yabancı dillerin önemini artırmıştır. Öğretmenlerin, öğrencileri sınıfta yaptıkları pek çok etkinliğe kolayca dahil edilebilen ve öğrencilerin eğitim hayatını kolaylaştıracak bu araçları kullanmaya teşvik etmeleri beklenmektedir. Bu nedenle, bu çalışma İngilizce öğretmenlerin Web 2.0 araçlarını kullanımına yönelik öz-yeterlilik inançları, tutumları ve kullanım sıklığını incelemiştir. Bu çalışma aynı zamanda Web 2.0 araçlarının entegrasyonunu etkileyen demografik değişkenleri de incelemeyi amaçlamaktadır.

Çalışma, karma bir yöntem tasarımı gerçekleştirmiş; nicel ve nitel veriler iki aşamada toplanmıştır. Çalışma verileri Diyarbakır ilinde bulunan 183 farklı devlet okulunda çalışan gönüllü İngilizce öğretmenlerden toplanmıştır. Nicel veriler demografik bilgiler, Web 2.0 Araçları Entegrasyon Aracı (W2TII) ve Web 2.0 Araçları Entegrasyon Öz-Yeterlilik Aracı (WTISEI) (Pan ve Franklin, 2011), Tutumları Ölçmek için Ayırıştırılmış Planlanan Davranış Teorisi (DTPB) Modeli (Hartshorne ve Ajjan, 2008) içeren dört bölümden oluşan bir anket aracılığıyla toplanmıştır. Farah (2011) tarafından geliştirilen bir dizi yarı yapılandırılmış görüşme sorusu, ilk aşamada ankete katılan 10 gönüllü İngilizce öğretmeninden dikkate değer detaylı veri toplamak için kullanılmıştır. Veriler SPSS 24.0 programı ve içerik analizi ile analiz edilmiştir.

Bulgular, katılımcıların genel olarak Web 2.0 araçlarını kullanım sıklıklarının orta düzeyde olduğunu ortaya koymuştur. Sonuçlar ayrıca, İngilizce öğretmenlerinin öz-yeterlik inançları, tutumları ve Web 2.0 araçları kullanımı arasında demografik değişkenlere göre anlamlı bir fark olmadığını ortaya koymuştur. Bununla birlikte, 21 ila 24 yaşları arasındaki katılımcılar Podcast ve Sosyal Ağ Sitelerinin kullanımına yönelik daha yüksek öz-yeterliliğe sahipken, 40 yaş ve üstü katılımcılar göreceli olarak düşük öz-yeterlik seviyesine sahiptiler. Ayrıca the FATİH Projesi ve İnteraktif Beyaz Tahta hizmetiçi öğretmen eğitimlerine katılan İngilizce öğretmenleri, Web 2.0 araçları kullanımına yönelik olumlu tutumlara sahipken, EBA ve DynEd eğitimlerine katılan İngilizce öğretmenleri Web 2.0 araçlarına yönelik olumlu tutum göstermemiştir. Web 2.0 araçları ve İngilizce öğretmenlerinin Web 2.0 araçlarını kullanmadaki öz-yeterlik ortalamaları karşılaştırıldığında, sonuçlar katılımcıların Web 2.0 araçlarını kullanma konusundaki güvenlerinin bu araçların orta düzeyde kullanımı ile uyuşmadığını ortaya koymuştur. Sonuçlar, İngilizce öğretmenlerinin Web 2.0 araçlarına yönelik öz-yeterlikleri ile tutumları arasında anlamlı bir fark olduğunu ortaya koymuştur.

Bulgular ışığı altında, çalışmanın İngilizce öğretmenlerinin Web 2.0 araçlarına yönelik öz-yeterlik inançları, kullanım sıklıkları ve tutumları konusunda farkındalık yaratmaya yardımcı olarak İngilizce öğretmen eğitimi programlarına ve hizmet içi öğretmen eğitimlerine katkıda bulunabileceği sonucuna varılabilir.

Anahtar Kelimeler: Web 2.0 araçları, öz-yeterlik inançları, İngilizce öğretmenleri, tutumlar, İngilizce öğretimi

ABSTRACT**AN INVESTIGATION INTO EFL TEACHERS' SELF-EFFICACY BELIEFS,
FREQUENCY OF USE AND ATTITUDES TOWARDS WEB 2.0 TOOLS****Eyyüp YAPRAK****Master Thesis, Department of English Language Teaching****Supervisor: Assoc. Prof. Dr. Gülden TÜM****July 2020, 127 pages**

In a world where distances are rapidly getting closer and cultures intersect more than ever, the necessity of a foreign language, especially a universal language, is an undeniable fact. Economic, political, cultural and sociological relations between countries are now stronger and more significant than in the past. The widespread use of the internet and the accompanying Web 2.0 technologies have increased the importance of foreign languages in recent years. Teachers are expected to encourage students to use these tools, which can be easily included in many of the activities that students do in the classroom and that will facilitate students' education life. Therefore, the present study aims to investigate EFL teachers' self-efficacy beliefs, frequency of use and attitudes towards Web 2.0 tools. This study also seeks to examine the demographic variables influencing the integration of Web 2.0 tools.

The study conducted a mixed method design, and the quantitative and qualitative data were collected in two phases. The study data was collected from 202 EFL teachers from 183 different public schools in Diyarbakır, Turkey. The quantitative data was gathered through a questionnaire consisting of four parts including demographic information, Web 2.0 Tools Integration Instrument (W2TII) and Web 2.0 Tools Integration Self-Efficacy Instrument (WTISEI) (Pan & Franklin, 2011), and the Decomposed Theory of Planned Behaviour (DTPB) Model to Measure Attitudes (Ajjan & Hartshorne, 2008). In the qualitative data collection phase, a set of semi-structured interview questions developed by Farah (2011) were used to gather data in considerable detail from the 10 volunteer teachers of English who participated in the survey in the first phase. The data was analysed through SPSS edition 24.0 program and content analysis.

The findings unveiled that the participants, in general, reported a medium frequency of using Web 2.0 tools. The results also revealed that there was not any significant difference between the self-efficacy beliefs, attitudes of the EFL teachers and their Web 2.0 tools usage according to the demographic variables. However, the participants aged between 21 and 24 seemed to have higher self-efficacy towards the use of Podcasts and Social Networking Sites, while the participants between the age of 40 and above had relatively low self-efficacy level. Besides, EFL teachers who attended FATIH project and Interactive Whiteboard teacher trainings had positive attitudes towards Web 2.0 tools usage, while those attended EBA and DynEd in-service teacher trainings did not show any positive attitudes towards Web 2.0 tools. In comparing the mean of the use frequency of Web 2.0 tools and EFL teachers' self-efficacy in operating these Web 2.0 tools, the results suggested that the participants' confidence in using Web 2.0 tools did not agree with the medium use of these tools in their teaching. The results revealed a significant difference between self-efficacy and attitudes of the EFL teachers towards the Web 2.0 tools.

In the light of the findings, it can be concluded that the study can contribute to the English teacher training programs and in-service teacher trainings by helping raise the awareness regarding English teachers' self-efficacy beliefs, frequency of use and attitudes towards Web 2.0 tools.

Keywords: Web 2.0 tools, self-efficacy beliefs, EFL teachers, attitudes, ELT

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ABBREVIATIONS

- CALL:** Computer Assisted Language Learning
CERN: The European Organization for Nuclear Research
Dyned: Dynamic Education
EFL: English as a Foreign Language
EIN: Educational Informatics Network
FATİH: Fırsatları Artırma ve Teknolojiyi İyileştirme Hareketi
ICT: Information and Communications Technology
INSET: Teacher Training
ISTE: International Society for Technology in Education
MALL: Mobile Assisted Language Learning
MoNE: Ministry of National Education
WWW: World Wide Web

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CHAPTER I

INTRODUCTION

1.0. Introduction

This chapter presents the rationale of this dissertation, which aims to investigate the relationship between self-efficacy beliefs, frequency of use and attitudes of the EFL teachers towards Web 2.0 tools. In this respect, background of the study, statement of the problem, significance of the study, and definition of the terms are described in detail.

1.1. Background of the Study

Today, the constant developments in the fields of science and technology call for the change in the use of technological equipment in educational sciences as in all fields. In today's educational institutions, such technologies used in the form of interactive smart board, tablet, and portable computer have substituted for the traditional teaching materials used before. The educational institutions of the countries carry out different projects in order to ensure that teachers and students can benefit from these technologies effectively, in addition to creating qualified learning environments appropriate to the needs of the current century. Accordingly, the Ministry of National Education (MoNE) initiated the the FATİH (Movement of Enhancing Opportunities and Improving Technology) project in 2010 in Turkey. With this project, it is aimed to increase the quality of education by ensuring the effective use of information and communication technologies (ICT) in the courses by ensuring equal opportunities in education and improving the technological infrastructure of schools (Ministry of National Education, 2018).

As an important point in achieving the objective of this the FATİH project, it crucially depends on the effective use of the technological innovations it offers by individuals in the role of practitioners within the scope of the project. Considering the fact that the active users of the project are teachers, the successful implementation of the project and achieving concrete results depends on greatly how efficiently teachers use these technologies for teaching instructions. Therefore, there is a need for teachers who can include activities to facilitate students' learning by incorporating technology knowledge in teaching as well as professional knowledge, general pedagogical knowledge, content knowledge, and pedagogical content knowledge (Blömeke and

Delaney, 2012). In fact, one of the most important objectives of the FATİH project is to provide trainings for teachers in order to ensure the effective use of technologies in the teaching process.

Given the fact that technology is now available in the most of the Turkish public schools, teachers have many opportunities to create effective learning environments on the digital platforms and to prepare supplementary teaching materials accordingly. Among these, Web 2.0 tools, which offer different kinds of services to the user, are of significant. Web 2.0 applications, which provide users with various kinds of web-based applications (O'Reilly, 2005), enable user-generated content and offer various opportunities for individuals to communicate with each other and to share the content (Thompson, 2007). Teachers that incorporate Web 2.0 tools in courses may “attract students to school work, meet individual learning needs, develop students’ critical thinking skills, provide an alternative learning environment, expand learning outside schools, and prepare students for lifelong learning” (Lemke, Coughlin, Garcia, Reifsneider, and Baas, 2009, pp. 7).

The learning theory of Web 2.0 tools are based on the principles of constructivism, in particular social constructivism learning theories (Conole & Alevizou, 2010; Lu, Lai, & Law, 2010). As students are encouraged to be active participants in the classroom and contribute to the content, Web 2.0 tools provide them with the opportunity to create content, manipulate the content, control the content and socialize by means of it (Horzum, 2007). In this context, the development of Web 2.0 tools can be considered a technological innovation that supports the change in the education system and can be utilized easily. Students capable of using Web 2.0 tools are not merely individuals who consume the information given in the classroom; they become active student groups that produce new information, manipulate this information, and question the source of the information as well.

That teachers are expected to learn how to operate Web 2.0 tools effectively in their instructions is an urgent need. However, at this point, the most serious problem ahead of today’s teachers is the generation Z. The dates given for Generation Z range from the year 1995 (Pacis et al., 2012) to the year after 2000 (Twenge, Campbell, Hoffman, and Lance, 2010). This generation, which is quite intertwined with technology, is also called “*Net generation*” (Oblinger & Oblinger, 2005; Schulmeister, 2008) and “*Digital natives*” (Prensky, 2001) since they were born in an age that is completely dominated by technology. People born in generation Z live in the high-tech

communication with technology-based lifestyles, and they are productive users of social media and capable of using technology in solving problems (Kapil & Roy, 2014). Since technology has surrounded the generation Z, they can instantly access information. Generation Z is technology enthusiast, conform to informality, learn quickly and embrace diversity (Twenge et al., 2010).

Teachers involved in the education of such a generation need to develop themselves in harmony with technology, acquire effective communication skills and be open to learning at any time. The use of Web 2.0 tools in teaching and learning processes of the Z generation is no longer a necessity, but an obligation. Teachers are expected to have the ability to develop necessary and sufficient technology-supported instructional materials in their fields. Web pedagogy content knowledge includes self-efficacy beliefs and attitudes of teachers towards the use of the web environment for pedagogical purposes (Horzum, 2011). Bandura (1995) defines self-efficacy as an individual's belief in himself in achieving the set goals or in performing a task. While self-efficacy affects the selection of activities to be performed by an individual, the expectation of success determines how much effort is to be made and how much time is to be spent to deal with the difficulties. In other words, individuals with high self-efficacy make more effort (Bandura, 1977).

Teachers' Web 2.0 self-efficacy beliefs are crucial for their use of technology in their classroom as their belief in their capacity to use technology is a powerful determinant of how effectively they will actually use technology (Lee & Tsai, 2010; Abbitt, 2011). From this point of view, it is crucial to determine the teachers' self-efficacy beliefs and attitudes to predict the future use of the Web 2.0 technologies in educational environments and to provide information to reform the use of teacher training programs. Therefore, the present study aimed to investigate the self-efficacy beliefs, frequency of use and attitudes of the EFL teachers towards the Web 2.0 tools in terms of various demographic variables.

1.2. Statement of the Problem

The advent of 21st century has brought new technologies that connect the “*digital native*” (Prensky, 2001) learners to the globalized world. One of these early innovations, referred as Web 2.0 tools, allows students to reflect more on their thoughts, extend the time - space limitations and reinforce trust between students and teachers (Palaigeorgiou & Grammatikopoulou, 2016). Those attributions have paved the way of the shifts in the

roles of students and teachers (Ajjan & Hartshorne, 2008). Students have to possess the problem-solving skills, mastery of the language, creativity, critical-thinking, life-long learning, media-literacy, technology and information literacy, social responsibility and group-work skills (Eryilmaz, Adalar and Icinak, 2015). Similarly, EFL teachers are required to use Web 2.0 tools in order to support student-student and student-teacher interaction and provide students with the opportunities to gain 21st century learning skills. They are inevitably expected to follow the technological trends, update their digital knowledge and competence, and adapt those to the changes easily. Likewise, as technology thrives, it becomes readily accessible, and is easily adopted for ELT, teachers are expected to change their teaching strategies or adjust their teaching activities to utilize available resources successfully (Golonka, Bowles, Frank, Richardson, and Freynik, 2014). Put another way, effective Web 2.0 tools integration in teaching process depends on a teacher's ability to effectively exploit his or her digital competence.

Although using technology in ELT classrooms has various advantages (Golonka et al., 2014; Omeri, 2015; Pourhosein & Sabouri, 2017; Rodinadze & Zarbazoia, 2012), technology alters the roles of teachers and students from static to dynamic, and affects teaching and learning methods, many teachers still have negative attitudes towards the use of Web 2.0 tools. This can be due to lack of facilities (Aydın, 2013; Basaran, 2013; Hubbard, 2008), teachers' lack of expertise (TEPAV & British Council, 2013), lack of training (Estable, 2014), lack of confidence (Basaran, 2013), or lack of teacher beliefs, teacher self-efficacy, and teacher attitudes (Ertmer, 1999). Similarly, some authors have also suggested that there are many barriers for technology integration such as lack of technical support, slow connection, personality factors, training and experience, lack of administrative support, and curriculum integration difficulties (Akça-Saklavacı, 2010; Smarkola, 2008; Brinkerhoff, 2006; Akbaba-Altun, 2006).

Abbitt and Klett (2007) and Hall (2008) assert that self-efficacy in technology integration is a significant agent that greatly influences teachers' use of technology as well as an obstacle that restrains teachers' technology incorporation. In a similar vein, some academics find that self-efficacy beliefs might show the intention to use technology (Aydın & Boz, 2010; Wang, Ertmer, & Newby, 2004). This result is also validated with the studies of Niederhauser and Perkmen (2010), who reveal that the ability of teachers' use of Web 2.0 in their work depends on the intrinsic features of self-efficacy in Web 2.0 usage. That is, self-efficacy beliefs may help EFL teachers to interpret Web 2.0. However, while abovementioned or other studies point out findings or analyses about pre-service

or university teachers' self-efficacy beliefs towards the Web 2.0 and its usage, to the knowledge of the author; there are few comprehensive studies of the EFL teachers' self-efficacy beliefs towards the use of Web 2.0 tools. This fact lends support to the importance of and need for the present investigation. Besides, such study can contribute to invaluable information to policy-makers, stakeholders, teacher educators and professionals, who are responsible for designing and implementing a meaningful teacher training programs across Turkey.

1.3. The Purpose of the Study

The current study offers several purposes. In a general sense, the core focus of this study is to investigate the self-efficacy beliefs, frequency of use and attitudes of the EFL teachers towards Web 2.0 tools in Turkey. One of the core aims of the study is to determine the degree of the EFL teachers' Web 2.0 use. In addition, this study intends to reveal any differences with respect to the demographic variables of the EFL teachers and their self-efficacy beliefs and attitudes. Then, the research attempts to reveal the whether or not self-efficacy beliefs or attitudes affect the EFL teachers' frequency of use in Web 2.0 tools. Finally, the purpose of the current investigation is to determine the relation of the self-efficacy beliefs and attitudes of the EFL teachers towards Web 2.0 tools integration for the instructional purposes.

1.4. The Research Questions

There are six research questions that have guided this research. The questions below are investigated in throughout process:

1. To what extent do EFL teachers incorporate Web 2.0 tools into their classroom teaching?
2. Is there a significant difference between the self-efficacy beliefs of the EFL teachers and their Web 2.0 tools usage according to the following demographic variables?
 - a. Gender
 - b. Age groups
 - c. Teaching experience
 - d. University degree

- e. Years of experience in using the Internet
 - f. School level
3. Is there a relationship between the attitudes of the EFL teachers and their Web 2.0 tools usage according to the following demographic variables?
- a. Gender
 - b. Age groups
 - c. Teaching experience
 - d. University degree
 - e. In-service teacher training (INSET) background
 - f. Years of experience in using the Internet
 - g. School level
4. Is there a relationship between the frequency of use and the self-efficacy beliefs of the EFL teachers towards Web 2.0 tools?
5. Is there a relationship between the frequency of use and the attitudes of the EFL teachers towards Web 2.0 tools?
6. Is there a relationship between self-efficacy levels and attitudes of the EFL teachers towards Web 2.0 tools integration?

CHAPTER II

REVIEW OF LITERATURE

2.0. Introduction

This chapter presents the background of the study, and gives definitions of significant terms. It also provides statement of the problem and the research questions. The chapter concludes with the limitations of the study.

2.1. Technology in Language Teaching and Learning: An Overview

The term Computer Assisted Language Learning (CALL) was coined in a TESOL Convention in 1983 (Chapelle, 2010). Although several prominent authors (Warschauer, 1996; Levy, 1997; Hoven, 1999; Plass & Jones, 2005) defined the term computer-assisted language learning (CALL) by their own lights, it commonly refers to the incorporation of technology into the foreign language teaching and learning (Chapelle, 2010) in order to facilitate the teaching process.

The description of benefits of using recent technologies in the language classrooms depends on the changing goals of language education and the changing requirements of post-industrial society. Today, with the integration of CALL, teachers aim to teach learners grammar rules and to assist them gain experience for variety of situations where students can explore social, cultural and linguistic forms in authentic and meaningful interaction both within and outside the schools. Warschauer and Meskill (2000) also expect that educators prepare students for various international cross-cultural contexts, which are increasingly required for success in academic, vocational, or personal life. The computer is an effective tool to implement this process since it allows students to access online international communities. Given these points, “the key to successful use of technology in language teaching lies not in hardware or software, but in ‘human-ware’ our human capacity as teachers to plan, design, and implement effective educational activity” (Warschauer & Meskill, 2000, p.307).

In the 2010s, there was a transition from CALL to Mobile Assisted Language Learning (MALL), especially thanks to the development of smart phones and tablet computers. MALL differs from CALL in terms of individual use, portability, spontaneity of access, interaction across various contexts (Kukulska-Hulme, 2012) and

contextualized learning (Wong, Chin, Tan, & Liu, 2010; Cohen & Ezra, 2018). Kukulska-Hulme and Shield (2008) define MALL as the use of technologies such as mobile phones, MP3/MP4 players, PDAs and palmtop computers for language learning.

In language learning context, MALL presents a number of exercises to promote vocabulary (Deng, 2011), pronunciation (Segaran, Ali, & Hoe, 2014), reading (Lan, Sung, and Chang, 2007), speaking, listening and writing skills (Li and Hegelheimer, 2013) and give instant feedback to the learners. In this way, EFL teachers can see where the errors occur, and where the students can do better, and can design a self-pace learning route for their students relatively. In their research about MALL for listening practices, Barcomb, Grimshaw, and Cardosoet (2018) suggest that teachers can facilitate the learning process and maximize student exposure to the target language anytime and anywhere through mobilizing and adapting aural input and practice,

Documenting both benefits and challenges of incorporating MALL activities in language teaching, some MALL scholars believe that the use of mobile devices for language learning can facilitate language learning while possible challenges can be accommodated or alleviated (Stockwell, 2008; Stockwell, 2012; Thornton & Houser, 2005). In line with this statement, Stockwell (2012) states that new technologies are emerging while new types of practical constraints might appear. Unavoidably, moreover, Stockwell (2012) points out that mobile learning will continue to take on new shapes and forms as it becomes more familiar to both teachers and learners. That is to say, in spite of the technical, psychological and educational obstacles presented in mobile learning, its popularity has rapidly been spreading everywhere in the world. Similarly, the readiness of mobile devices has been widespread among the “*digital natives*” (Prensky, 2001), which makes MALL attractive. Therefore, it is expected that most limitations of mobile phones for language learning impend to disappear in the future.

2.2. The FATİH Project

As an object of the Vision 2023, e-Transformation Turkey Project, the Ministry of National Education (MoNE) devised a project called the FATİH (Fırsatları Artırma ve Teknolojiyi İyileştirme Hareketi), standing for “*Movement of Enhancing Opportunities and Improving Technology*”, in English. The project aims to support information technology-based education and provide this to students in public school. The FATİH Project was designed in accordance with Information Society Strategy Document,

Development Plans, MoNE Strategic Plan and IT (Information Technology) Policy Report, which describe Turkey's actions in the process of becoming an information society (Akıncı, Kurtoğlu & Seferoğlu, 2012).

The piloting of the project started in 17 cities and 52 schools from 2011 and 2012 academic year (Ministry of National Education, 2011). Despite the fact that it is due to be completed in 2015, the project is still on the move, and it presents the following purposes:

- to complete infrastructure of information and communication technology in formal and informal educational institutions belonging to the Ministry of Education,
- to increase the students' IT (information technology) competencies and to develop educational programs supported-information and communication technologies,
- to provide information and communication technologies which students and teachers can use effectively (Ministry of National Education, 2011).

The project including the purposes abovementioned has five components:

- to provide equipment and software substructure,
- to provide educational e-content and management of e-content,
- effective usage of the ICT in teaching programs,
- training of the teachers,
- and conscious, reliable, manageable and measurable ICT usage (Ministry of National Education, 2011).

In this context, teachers received training, Interactive White Boards (IWB) with internet connections were established in schools, and tablet computers were distributed to students.

Literature review presents various findings on the introduction of the FATİH Project into Turkish education system. Teachers, students, and parents think that successful implementation of the FATİH Project according to its purposes can contribute to education (Şahin, Aktürk and Çelik, 2013). On the contrary, some teachers doubt that the project has been successful (Karatekin, Elvan and Öztürk, 2015). Çiftçi, Taşkaya and

Alemdar (2013) report that half of the participants believe the project did not achieve its goals merely due to insufficient in-service teacher trainings they had received. Therefore, long-term in-service teacher training in the scope of the FATİH Project should be provided for teachers (Aktaş, Gökoğlu, Turgut & Karal, 2014). Although school administrators have positive thoughts about the project, they think that competent staff should be employed to solve the problems that arise immediately (Akkoyunlu & Başkan, 2015).

In her research to determine the predictions, awareness, anticipations, and problems of social studies teachers and history teachers about the FATİH Project, Şengül Bircan (2018) indicates that teachers have knowledge about the FATİH Project and they believe in the importance of the project, but they find the in-service teacher training of the project inadequate and have negative beliefs about the successful implementation of it. Similarly, Sarıtepeci, Durak and Seferoğlu (2016) determine that although teachers participated in the in-service teacher trainings within the scope of the FATİH Project, they haven't successfully met the needs to use technology in education, the use of the internet for educational purposes, and the effective use of technology for the purpose of creating teaching material. The indicator of this failure might be due to the low self-efficacy and/or negative attitudes of teachers' towards the FATİH Project.

2.3. EBA, Educational Informatics Network (EIN)

EIN was introduced as one of the components of the FATİH Project's called "educational e-content and management of e-content" through the website, addressed as www.eba.gov.tr in October 2010. EIN is an online social educational platform initiated by the General Directorate of Innovation and Educational Technologies. The aim of the platform is to blend technology into education by using information technology tools and featuring efficient use of lesson materials. Moreover, it seeks to enable students to be self-determining and self-learning individuals. EIN has been designed to provide suitable, reliable and accurate e-content and is constantly being developed. Besides, EIN presents educational e-contents such as visuals, videos, offline lessons, course books, documents, animations, simulations, individual learning materials, and learning materials, applications and games to facilitate access to information and learning by actively involving students in learning. Once students are involved in EBA, they can cooperate

and engage in the teamwork with peers all over Turkey (Educational Information Network, 2019).

The MoNE and TÜBİTAK, referring to *The Scientific and Technological Research Council of Turkey* (Türkiye Bilimsel ve Teknolojik Araştırma Kurumu in Turkish), have collaboratively developed e-content materials to make use of information technologies in all levels of education. Moreover, they intend to ensure the sustainability of the program on public relations as well as all over the world. In accordance with the curriculum, the contents of course books have been incorporated with interactive elements such as animation, video, audio, photo, map, graphics, table, and simulation (Ministry of National Education, 2011).

Although the MoNE is the main digital source provider, volunteer stakeholders of education, teachers and students have also chance to offer the content materials they create. Additionally, private publishing companies are widely available on this platform to present rich e-content materials in English and German languages. These materials include interactive videos, audios, games, flash cards, activity and reference books, and dictionaries. Accordingly, the platform serves as a pool of source that is open to the public, which enables opportunity to anyone with education outside the buildings.

Teachers use the EBA system in an attempt to reinforce the teaching content (Türker & Güven, 2016). EBA is also used by students in different ways. In a study by Tüysüz and Çümen (2016), students stated that they found the EBA useful in terms of consolidating topics, preparing for exams and subject revisions. In addition, students indicated that EBA helped them improve their academic achievements, test solving skills.

2.4. DynED Courseware (Dynamic Education)

Today, under favour of the Internet and multimedia tools, technology continues to contribute to language teaching significantly. Technology provides various opportunities including individual learning and creation applications (Chen, 2005), improving student autonomy (Warschauer & Meskill, 2000; Chiu, 2008), recognition of the sociocultural structure of the target language (Wang, 2004), development of interaction and creating a collaborative learning environment (Shield & Weininger, 2004), providing quick feedback and easy editing (Dudeney & Hockly, 2007), and enriching language learning materials (Shin & Son, 2007).

Taking into account the advantages of computer-assisted foreign language education in order to contribute to foreign language teaching and learning, the Ministry of National Education (MoNE) adopted the DynEd (Dynamic Education) English Language Learning System developed by the San Francisco-based company. Thus, a protocol was signed between FuturePrints, the country representative of DynEd International Inc., Sanko Holding Inc., and the MoNE in 2006. Sanko Holding Inc. granted the software to the MoNE. The system was designed by a team of approximately 50 people consisting of expert educators, computer programmers and singers with the contribution of educational institutions such as Oxford University Press, Longman, Prentice Hall, BBC and Stanford University and technology companies such as Apple, IBM, and SONY.

DynEd system has been incorporated in the English language classes in public schools nationwide for the 4th and 8th grades in the academic years of 2008 and 2009 and for the 9th and 12th grades in the academic years of 2014 and 2015. The system consists of 15 different educational softwares, but only four of them are in use (DynEd, 2018). The system aims to improve speaking and listening skills in the first stage and reading and writing skills in the next stage, and offers the opportunity to work online or offline. In addition to being available on computers, Android and iOS software are available for tablet and smart phone users. The DynEd features Intelligent Teaching System including automatic adjustment of the difficulty of the program according to the students' understanding speed, evaluation of the students' learning behaviours according to more than 100 criteria, providing immediate written feedback, and determination of the individual work efficiency grade for students, classes and schools. One of the most important features of the DynEd system is that it forces active involvement of the students. In doing so, the system constantly checks the level of the students and assists the student to find the correct answer in the light of his own logic.

Uras (2018) reports that DynEd positively affects student achievement and those students have a positive view towards DynEd software, although they have negative views towards the English course. DynEd educational software positively affects students' grammar knowledge, vocabulary, reading, listening and academic achievement and individual learning (Çakmak, 2012; Meri, 2011; Önal, 2015; Selçuk, 2016), but not so effective in speaking and writing skills (Çakmak, 2012). Although students have a positive opinion about the necessity of the software (Ucur, 2010), it does not make a

significant difference in acquiring autonomy skills such as self-management, awareness, critical, reflection, and self-evaluation (Mete, 2010).

Coşkun (2013) indicates that the vast majority of English teachers do not incorporate DynEd into practice classes, but they partially develop positive opinions towards it. Although there is a general belief that negative opinions of the teachers are related to their insufficient computer knowledge, the study reports that computer knowledge has no effect on teachers' attitudes towards DynEd (Yiğit, 2010). The lack of hardware (computer, microphone, headset, etc.), Internet connection problem, intensive curriculum, crowded classrooms, inadequate servers, technical problems and negative attitudes of administrators cause teachers to avoid using DynEd (Coşkun, 2013; Meri, 2011 ; Sarıcaoğlu, 2010; Yiğit, 2010).

2.5. The Internet

Internet communication across the world began in 1969 when the US Department of Defence established a special network for the communication of military computers. This network has formed the beginning of packet computer communication and thus the Internet. In the US until the early 1980s, internet access was available in 500 computers in military laboratories and computer departments of universities. In 1987, the Internet expanded to 28.000 user computers in many universities and research laboratories. However, the actual development of the Internet has emerged when Tim Berners-Lee, a computer scientist who works for CERN (The European Organization for Nuclear Research), introduced the World Wide Web (www), one of the services on Internet, in 1991 (Flake, 1996). Based on this idea, Berners-Lee and his team created the first version of the web consisting of four basic elements: HTML, HTTP, a web server and a browser. The earliest web pages were in black and white and completely text based. The web sites that emerged during this period also aimed to provide information.

The revolution in computer-assisted language learning has arisen from the rapid introduction of internet and mobile technologies. Thanks to the one of the major innovations in the twentieth century in the field of communication, the Internet, today individuals can practice various activities on the electronic environment such as exchanging messages and letters; reading magazines, newspapers and books; visiting museums and galleries; attending meetings, conferences, lectures and exams. The Internet, which everyone can use anywhere, anytime, provides many environments and

resources, especially for those who learn the target language where the language is not spoken. Some of these media and resources are available online for commercial purposes (Tell me More, Clarity English, English town, Global English, English Club, etc.), and some are foreign language learning sites prepared by government agencies such as the BBC, British Council and VOA (Voice of America). In addition, various chat environments and gaming sites that can be accessed over the Internet can also provide benefits of learning English.

Web has led to the introduction of various new features and technologies to the Internet platform since its emergence. This headway is divided into four main stages in terms of services and features it provides. These stages have been developed as Web 1.0 Web 2.0 Web 3.0 and Web 4.0 respectively (Murugesan, 2010).

2.6. What is Web 2.0?

The focus of Web 1.0 is the information placed on the site by users with technical knowledge. In Web 1.0 users were only readers and used the web to obtain existing information, mostly to read content, to download programs and files provided to them by various web servers. There was no human interaction. In another word, Web 1.0 meant passive retrieval of information published on the Internet. This information was available to everyone in the world on static web pages. Most of these pages had colour, but there was little movement.

With the advancements in information technologies, different web tools have been developed and enabled individuals to access information they need and interact with this information (Castells, 2012; Mazurczyk, Wendzel, Zander, Houmansadr, and Szczypiorski, 2016). Those innovations in web technology have provided a transition from web period, which is called Web 1.0 with only a readable platform, to Web 2.0 period where its users can create information and interact with it. Those features make Web 2.0 the most commonly used platform (Murugesan, 2010).

Unlike Web 1.0. its second generation, in Web 2.0 any users can send information onto the web pages. Individuals can send feedback to this information, link items with one another, and comment on the web page (Caladine, 2008). In this way, web users are able to develop web pages without the need of technical knowledge. In addition, users are no longer web readers only contrary they become web literate. Those individuals can create online encyclopaedias, diaries or communities through collaborative work. These

communities can inform each other, share information, provide feedback and produce content together.

The term Web 2.0 was introduced by O'Reilly (2005) in a brainstorming session between O'Reilly and John Batelle at a conference in 2004. They described the concept of "*the Web as a Platform*" where software tools built to take advantage of internet connectivity, shifting away from the Web 1.0 technologies, which do not enable users to interact with content. Velagapudi (2013) also interprets the term Web 2.0 as "*next generation*" of Internet technologies that promotes interaction with users (as cited in Ahmed, Almunim and Almabhouh, 2016).

According to Kostoula-Christina (2016), Web 2.0 refers to the use of the Internet as a mediator to promote interaction among users through tools and technologies such as Blogs, Wikis, or Podcasts. That is, Web 2.0 applications and services enable users to share content without facing technical barriers, while at the same time making use of the Internet's potential for social interaction and collaboration, rather than using the internet merely as an information provider. The common characteristic of those definitions are that web2.0 features "interaction" among its users.

In the Web 2.0 realm, all members of a party can contribute to create rich content (Solomon & Schrum, 2007). Therefore, Web 2.0 tools can be called social software and bring about the transformation from web reader to web literacy since the Internet is no longer an environment in which ready-made information is transferred directly. Rather, it is a platform where content is produced, shared, combined and transferred with the participants. Similarly, Brown (2009) argues that popularity and availability of Web 2.0 tools have enabled today's users, who used to visit only non-interactive web pages, to become individuals who share, interpret, collaborate and interact with information, actively participate and produce contents.

O'Reilly (2005) also suggest that Web 2.0 users can manage the content they create, and share it with groups of learners having shared interests or aims. One example is Google's Web 2.0 services, where learners can edit documents or share with pairs. In addition to sharing information with others, users can subscribe to services that alert updates when someone adds new information to their existing content, such as adding an update to their blog or adding a new video to their channel (Alhassan, 2017). O'Reilly (2005) specifies the innovations of Web 2.0 technology as follows:

- web applications can run on a browser without installing on a computer,

- user can control the data,
- web services are used instead of using package programs,
- provide a participatory environment for users, free services to users, changeable data to users, software that works independently of the device (with different devices),
- and support collective intelligence (O'Reilly, 2005, pp.20).

2.7. Web 2.0 Tools

The common Web 2.0 tools include Blogs, Wikis, Podcasts, Social Networking Sites, Image/Photo Sharing Sites, and Course Management Systems (Davies & Merchant, 2008; Griffiths & Wall, 2011; Meyer, 2010). The difference between these Web 2.0 technologies is that they offer various purposes to users. The features of these tools and examples of their use in education are given below.

2.7.1. Blogs

The term blog is an abbreviation for web log. Blogs are websites that contain text, images, audio files, and links created individually or by a group. Blogs are usually used as diaries, and individuals mostly use them as websites for self-promotion, self-expression, persuasion, and argumentative purposes. Individuals can also use blogs to support another blog through posting, commenting, or adding articles. The ability to post comments and share information makes these tools collaborative and social-interactive. Moreover, on blogs, opinions can be expressed about daily issues or collaborative group work can be done to improve the level of personal or professional knowledge. Blogs allow users to think and interpret information through information sharing and commenting opportunities. Besides being used as a diary for personal purposes, blogs can also be utilized for educational purposes.

Teachers can incorporate blogs in lessons in order to provide learners with personalized learning. Again, blogs can create an environment for accessing what other students have written, reading information or expressing the thoughts of each participant (Cych, 2006). Through blogs, teachers can inform students about the topics and evaluate their products easily. In addition to this, students are able to examine their pairs' products (Wyld, 2008).

To improve communication between students and teachers in educational settings, educators can apply blogs to their educational situation. The fact that blogs interact with other social networks is one of the most important factors that increase communication. Even in terms of communication, this is an enough reason to prefer educational blogs instead of other applications as today's most of individuals use any of the social networks. RSS (Real Simple Syndication) is also an important advantage for users to see updates on Blogs instantly.

Another important potential for blogs is their readiness to provide collaborative learning spaces for students. Collaborative learning is gaining increasing interest in many countries around the world. In this context, blogs enable students to work together with many participants such as writers, scientists and professionals as well as independent of space thanks to the digital environment. This provide many new alternatives to the learning process (Richardson, 2010).

Educational blogs can also be regarded as a virtual extension of the classrooms. Teachers can allocate blogs as a dedicated space for students, where announcements can be viewed and guided by teachers, where students can work towards common interests, send their work and opinions. For students, blogs can increase communication, motivation and contribute to personal development. With blogs, learning takes you outside the school walls.

2.7.2. Wikis

Wiki is a Hawaiian word meaning, "*fast*" (Wiki, 2019). Wikis are digital encyclopaedias published on websites. They are interactive and collaborative authoring tools that allow users to quickly and easily edit content. Therefore, they are frequently used in collaborative content creation environments. The content created by a group using wikis can be actively managed. Wikis have a functional structure that allows users to define a word, add new ones, edit or delete the wrong or missing ones. A wiki user can discuss and reorganize added content. In this way, learning becomes a part of a collaborative approach, leaving individuality.

In educational contexts, students can post information or content on the Wikis websites. Another advantage of using the Wikis is that it provides the highest level of opportunity for the interaction between students in the subject expression. A teacher can do a group work by splitting the same subject into logical parts.

The common content development of wikis provides students with tasks that require cooperative writing (Hadjerrouit, 2014); it provides a setting where learners can collaborate, produce together, discuss and interact. Thus, wikis allow students to contribute to each other's learning (Wang, Zou, Wang, and Xing, 2013). It provides a platform where students can receive feedback from each other or their teachers, especially in foreign language teaching (Wang et al., 2013).

Morgan and Smith (2008) observed that students, as part of a writing community, collaboratively wrote comments and suggestions to each other's writings in a wikis environment they studied in terms of cooperative writing. They found that if wikis is used as a collaborative writing tool, students are more interested in writing processes.

Wikis offer users encouraging group work such as creating, editing, and deleting common content (Li, 2013). The joint formation of the course content by students and teachers also contributes to the formation of active learning environments (Frydenberg, 2008). Wikis are important not only for gathering information but also for showing the historical development of the formation of information. In wikis environments, each student can take part in the creation of course content, and in this respect, student-centred learning environments are promoted.

2.7.3. Podcasts

Podcast is one of the most used Web 2.0 tools. The term podcast is a blending word deriving from the words *iPod* and *broadcasting* (Hammersley, 2004). Although Podcasts were originally developed for the benefit of iPod users, it was later moved to other devices including mobile phones, music players, tablets and computers.

Unlike other services, podcasting can be subscribed and tracked via RSS feed. This means that RSS files have the web address of the media file. When a user wants to listen to this resource, he subscribes to the site. Individuals can subscribe services including video, audio, and news sources that are of their interest. Once users have subscribed, they can get updates for the latest podcasts from that site. In doing so, users can automatically download media content onto personal computers or on an audio management program like iTunes, Windows Media Player or MusicMatch (Meng, 2005).

Podcasts feature Web 2.0 technology (Bolden, 2013) and they distinguish from other media broadcasts in which users can listen and / or watch them at any time with any tool they choose (Kelly and Klein, 2016). Thus, it can be suggested that podcast is a

technology that uses distance education and visual materials together. If teachers and students upload video or audio podcasts to web pages created with this technology, they can access education anytime and anywhere.

The development of podcasts in foreign language teaching has been vitally important in educating future EFL teachers (Kim, 2011). For language learning, Podcasts can help students of different learning styles in language teaching to listen to grammar explanations, to repeat grammar points, to repeat important vocabulary, to listen and practice pronunciation and cultural elements in the target language (Rosell-Aguilar, 2007).

2.7.4. Social Networking Sites

The term social networking is used to describe a person's relationship with people around him. However, online social networking is defined as a set of activities used by a group of people through social technologies (Hamid, Chang, and Kurnia., 2009). Today, many social networking sites have emerged and reshaped individuals' communication, interaction, collaboration and even the learning process. This technology has created an interactive virtual network where people can share their feelings, thoughts and works with other people. The number of users of this virtual structure is increasing day by day and new insights are emerging about communication (Cheung, Chiu, and Lee, 2011). Social networks such as Facebook, Instagram, YouTube, Myspace, LinkedIn, Twitter, and Pinterest allow people to connect with each other, communicate, search for topics of interest, video, music, and allow you to share objects such as news, pictures, and documents. They also allow for different activities such as looking at different user profiles, listing preferences, joining common groups.

We Are Social and *Hootsuite* (Data Reportal, 2019) reveal social media usage statistics in the report entitled "*Digital in 2019*". Accordingly, 3.484 billion of 4.388 billion internet users in the world are active social media users. The 43 percent of the world's population uses social networks. In Turkey, this rate is 63 per cent (Data Reportal, 2019). Accordingly, the active use of social media in Turkey is above the world average. Figure 1 also reports that the most preferred social networking websites in Turkey is Facebook followed by YouTube and WhatsApp. This usage rate reveals that social networks may have great potential in terms of education.

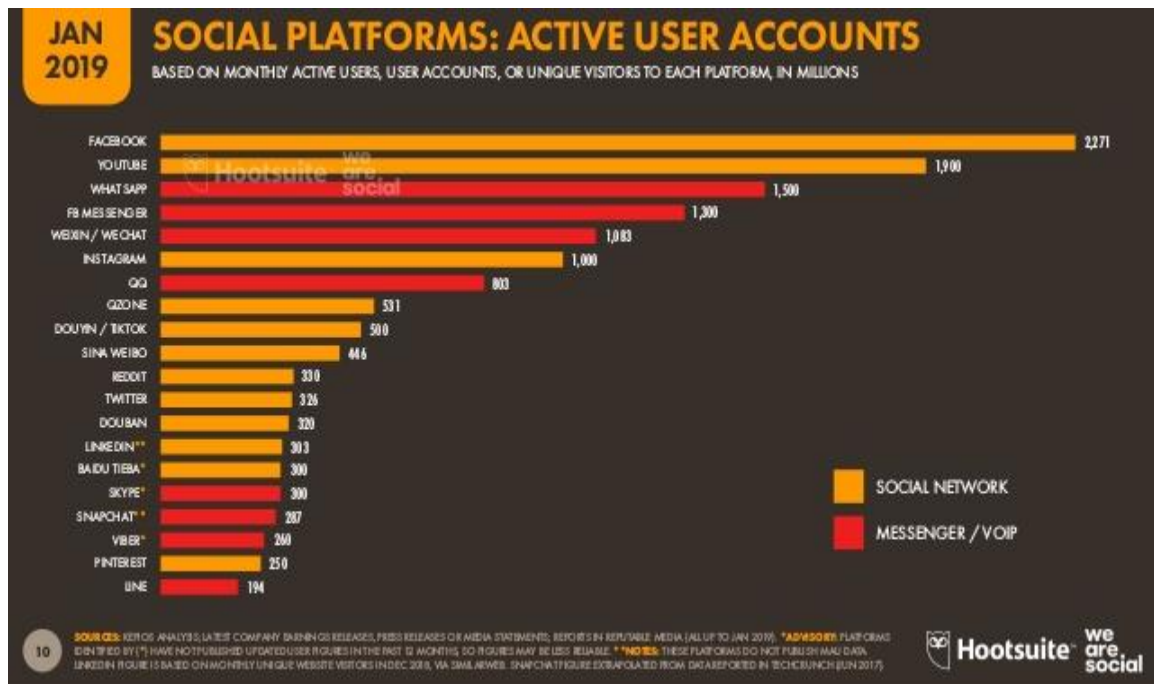


Figure 1. Social Platforms: Active User Accounts

Source: Data Reportal, 2019

Thanks to such practices, a new era has started in the global connection between individuals. Using these social networks and digital literacy, ideas and innovations are spreading faster than ever before. Many features and opportunities of social networking technologies help teachers to support their teaching-learning processes with active, creative, collaborative learning, and to improve students' student-student, student-content and teacher-student interaction, and use and develop research inquiry and problem solving skills. Such widespread social networks are used effectively for different purposes in the education and training process. Teachers use social networks for instant communication, dissemination of information and content, following new approaches, informing parents, exchanging ideas with their colleagues on certain issues, interacting with students, following students, providing easy access to information and resources, assigning students and following up homework. In addition, social networks contribute to the blended teaching experience, supporting students learning process and teachers teaching and evaluation processes.

A revolutionary innovation featured by Web 2.0 technology, Social Networking Sites are a new communication medium, which are constantly becoming popular. The research documents that social networking sites show positive results such as providing students with a critical and autonomous learning environment, being a tool to teach

outside the classroom, and increasing the speed of learning by providing teachers with rapid feedback (Patel, 2015). In addition, these social media channels, especially, Facebook enhances students' motivation (Kabilan, Almad, and Abidin, 2010), help peer review to improve writing skills (Shih, 2011), and work together to facilitate the learning of solidarity (Wang, Lin, Yu and Wu, 2012). Social media provides important opportunities not only for students, but also for teachers to gather, to share their knowledge, organize joint activities and create discussion forums.

2.7.5. Image/Photo Sharing Sites

Image/photo sharing sites allow users to share and publish content in any image format on any subject. Image/photo sharing sites, including Flickr, Google Photos, 500px, and SmugMug, are amongst the most common platforms to use for many different purposes. Users can upload photos on these sites via mobile, and if sharing options are turned on, they can be sent automatically or sent to Twitter, Facebook, Blogger and other social networks. In educational activities, students and teachers can actively benefit from image/photo sharing sites.

Flickr, for instance, can be used effectively as a creative learning tool with the help of groups feature it provides (Gonzales & Vodicka, 2010). In educational environments, Flickr is available in a variety of formats for students and teachers. Flickr users can search the vastly growing photo archive, through using tags or keywords. Using Flickr, it is possible to change tags, annotations, and groups; place images on a world map, and edit photos with online photo editing tools. Flickr can help to acquire many skills such as digital literacy, visual arts and language skills. Creating a virtual museum tour, teaching words, teaching the use of digital cameras, brainstorming digital paintings and painting, are some examples of classroom or extracurricular activities. Thanks to the tagging feature in Flickr, this application can be used with Google Earth. It can also be utilized to create visual discussions, visualize a poem, visualize events at school, and create e-images. Moreover, photos transferred to image/photo sharing sites can be edited online, shared, or combined to create a slideshow. Animoto, BigHugeLabs and PhotoPeach programs allow individuals to create video images.

To summarize, image/photo sharing sites can be utilized effectively in the preparation of vocabulary teaching, visual presentations, collections and videos, in all

subject areas for discussion, in brainstorming activities, in creating visuals for learning, in creating e-portfolios for learning and evaluation.

2.7.6. Course Management Systems (CMS)

In asynchronous (different time) or blended training, CMS is a management software that allows learners to choose and register for the course, to present content, to measure and evaluate, to monitor and report user information and performance. To put it another way, CMS is a structure that delivers electronic learning materials to students, offers different trainings to students, tests and evaluates students, and stores this information in the database. CMS enables the processing, storage, distribution of educational materials and support management and communication related to education and training.

CMS can be used in the traditional classroom settings and teachers can support and manage face-to-face educational activities online. With the help of CMS, the instructors can share their announcements and documents with their students, share assignments with their students, monitor and evaluate the students' work online. On the other hand, students can access the documents and announcements related to the courses they take online from anywhere on the CMS. In addition, teachers and students can communicate with each other using tools such as real-time messaging, discussion boards, and forums on CMS.

Al-Ali (2007), in his study examining the use of open source Sakai NMS software in higher education, found that the use of CMS software has educational advantages in terms of supporting cooperative learning and student participation in the courses. Cheng (2007) examined students' perceptions of CMS software, and in a study conducted with 296 students, they found that students had a positive view of CMS software, and that students perceived CMS software as an easy-to-use tool in the lessons. To put it simply, CMS is a medium to increase student-faculty communication, enables the implementation of active learning techniques, supporting group work among students, and offering individualized support.

2.8. Why Web 2.0?

What makes Web 2.0 tools more preferable than Web 1.0 tools is that it enables many users together to focus on a common mind on the same target or product in a social

and active environment, rather than just reading information on the screen (O'Reilly, 2005). In a broader sense, Web 2.0 is defined as a second-generation web platform where users can develop content; collaborate with each other, and exchange information and ideas among users (McLoughlin & Lee, 2007). In addition to the ubiquitous of internet, with the emphasis on social skills and creativity, the prevalence of Web 2.0 tools has increased (Crook et al., 2008).

Another important reason to incorporate Web 2.0 tools into teaching and learning is that a crucial fact that they supports the users to work with flexible time intervals and the users' creativity (Jarrett, 2008). In addition, Web 2.0 tools are user-friendly programs with very easy-to-use features. Many videos and animations related to the use of these programs are easily accessible. Web 2.0 tools also see their users as content developers and become stakeholders in content development. Becoming a stakeholder leads to the gathering of a very large audience for the same goals and objectives and often to produce very wide and quality products (Lu, Lai, & Law, 2010; O'Reilly, 2005).

2.9. Web 2.0 Tools and Language Learning

It is an indisputable fact that information and communication technologies are used extensively, and that the accumulation of knowledge is increasing day by day. Thus, it is imperative for ELT teachers to benefit from this accumulation even more. With globalization, the circulation of information and the need to benefit more from this information has led to the development of internet. As a result, the internet led to the advent of web tools that serve for variety of purposes. Considering that there are rich sources of English information on the Internet and many sites such as BBC Learning English, British Council: Learn English, Voice of America, National Geographic, Learn English for free with Ello, English Club TV, which serve to teach English, Web 2.0 tools can present great opportunities for language learning.

Web tools in language teaching started with the use of Web 1.0 tools and developed further with Web 2.0 tools, primarily because initial tool was introduced earlier. Dudeney and Hockly (2012) define this shift as one of the most important transformations to move from Web 1.0 technology with static, stable and expert control to Web 2.0 technology with dynamic, creative and user-oriented. Web 2.0 tools are capable of increasing the interaction between the learner-learner and learner-learner in educational processes and bring them to a higher level (Nandhini, 2016).

With the incorporation of the Web 2.0 technology into language classrooms, students can create a variety of language resources without any expertise, so that both teachers and students can spend the teaching-learning process more freely and creatively. A teacher, who uses Web 2.0 tools in language teaching, brings novelty and variety to the class with the different activities, programs and products to his class. For instance, Web 2.0 tools can appeal to the sense organs of the students, thus promoting different learning styles, which makes the students comfortable and active in the educational environment (Prensky, 2009). Using Web 2.0 tools, for example a writing task on a blog, students can listen to the criticism of the products they have prepared and can bring criticism to the other products easily and comfortably. According to Conole and Alevizou (2010), Web 2.0 tools provide students the path to go beyond textbooks, create content, and manipulate this content. This allows students to develop their self-confidence. This also means that students can have the opportunity to express themselves better in the community with Web 2.0 tools.

Studies on Web 2.0 tools often refer to the effect of these tools on increasing students' motivation. Sometimes the necessity of using online tools can appear to be a challenge to be overcome by students and teachers. Ushida's (2005) research reveals that although the use of tools in Web 2.0 language classes increase the level of anxiety in students, it increases the motivation level and contributes to the change of student attitude towards the course towards positive. In addition, the study also finds that incorporation of Web 2.0 tools in language classes promotes students eagerness to take advantage of opportunities for language use. One of the noteworthy results of Ushida's work is the contribution of the use of Web 2.0 tools in language classes to the creation of a common classroom culture. Halic et al. (2010) also mention the impact of Web 2.0 tools on creating a "group culture" in language classes. In addition, Stevenson and Liu (2010) focus on the contribution of Web 2.0 tools to students' communication in their research on the use of social networks in language classes. Web 2.0 tools enhance the potential of students by facilitating communication between students since they provide opportunities for meaningful language production, which increases interest in language learning (Chartland, 2012). The contribution of online tools to this meaningful learning environment has also been reported in the study of Kabilan, Ahmad and Abidin (2010).

2.10. Web 2.0 and Constructivist Learning

Constructivist learning is the ability of people to learn new knowledge by using their previous experience and knowledge to produce different ideas by using this new knowledge (Hawks, 2014). Similarly, Collins (2015) states that in a course using constructivist learning method can enable students actively construct their existing experiences and knowledge and acquire new knowledge, and use it to produce new ideas and experiences. In constructivist learning, the student accommodates knowledge into the mind and gives meaning to it, using its previous attitudes, beliefs and experiences as a reference (Stavredes, 2011).

The pioneers to the development of this theory include L. S. Vygotsky, J. Piaget, J. Dewey, and J. S. Bruner. According to this view, students bring some knowledge, experiences, ideas and understanding capacities they have rather than with empty/blank minds. Learning takes place in a constructivist process. This refers to the process of structuring on knowledge, skills, and experiences long before the information is suddenly delivered. Knowledge is constantly dynamic and changes with experience. The individuals actively participate in their learning process. They prefer working in groups rather than working alone in constant communication and interaction with their environment in which they can produce self-knowledge.

Constructivist learning is also a problem-solving method. It is important for the individuals to ask questions to the problem, to make research and discovery for new information, to work on the new information they have obtained and to produce a unique design at the end. Again, in this method, each individual in the community can look at the same object or the same event from different dimensions, read it and interpret it differently. With this aspect, the individual can develop a unique learning style and share it with others. These differences are significant for student motivation, personal autonomy and the development of personal abilities. In short, in the constructivist learning theory, the individuals experience a personal and social development process. Doolittle (1999) associates constructivist pedagogy to a bridge between theory and practice. Doolittle (1999) also mentions the following principles of constructivist learning:

- Learning should take place in authentic environments that evoke the real world.

- For the realization of learning, social relations must be supported and there should be mutual negotiation between learners and teachers.
- The course content should address to the students.
- The course contents should be prepared considering the current knowledge and experiences of the students.
- Teachers are guides and facilitators, not the authority.
- Teachers constantly encourage students to approach the course content from different perspectives.

From the psycho-pedagogical point of view, those principles and considerations of constructivism appear highly relevant to Web 2.0 tools learning. The fact that technology has become an indispensable part of the design and teaching of foreign language education has facilitated the application of basic principles of constructivist learning to technology and digital materials (Shieh, Chang, & Liu, 2011). Research about pedagogical perspectives of Web 2.0 tools (Anderson, 2007; Albion 2008 and Churchill, 2009) indicates that these tools can be adopted to support constructivist learning in and outside the classroom settings. The best way to do this is that teachers use these tools effectively and guide students (Horzum, 2010).

By means of Web 2.0 tools, individual differences are at the foreground and learning is acquired meaningfully by participating together and cooperating. This gives Web 2.0 tools prominence to support constructivist learning. Teachers and students who use Web 2.0 tools and applications for learning purposes can obtain information about the occurrence of learning process. Besides, the teacher can see the whole process of how students understand, construct and solve a concept, event or problem. To be able to see the whole process will help teachers and students to master all aspects of learning. In all aspects of learning, the teachers can easily correct the students' learning deficiencies and make corrections (Horzum, 2010).

2.11. Social Cognitive Theory

Self-efficacy is a concept within social cognitive theory. Social cognitive theory stems from the social learning theory, which is based on a rich historical background, dating back to the late 1800s. Social cognitive theory defines human behaviour as a

dynamic and reciprocal relationship of personal factors, behaviours and environment (Bandura, 1977, 1986, 1989).

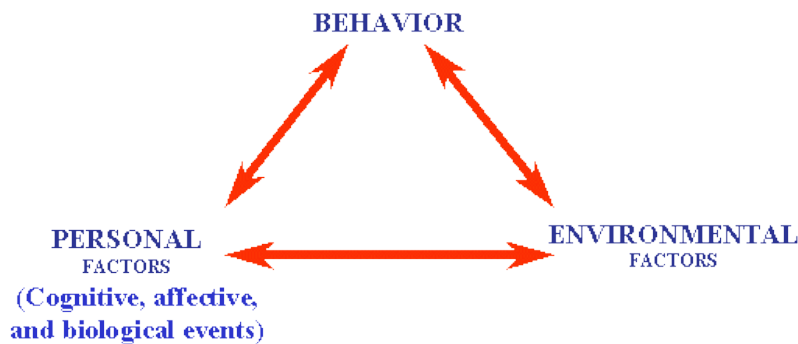


Figure 2: Reciprocal determinism,

Source: Bandura, 1986, pp.255

According to the theory, an individual's behaviour is determined by each of these three agents. In social cognitive theory, the individual and the environment he lives in are regarded as a whole. The learner's cognitive responses, behaviours and environment work together to bring about learning. The individual observes the models around him and builds self-efficacy perception. In this way, he develops a belief that he can also do the work done around him. Bandura changed the name of his theory from social learning theory to social cognitive theory. In doing so, he aimed two things: first, to separate his theory from the social learning theories of that time; the second is to emphasize the importance of cognition in people's behaviour, self-regulation, and information coding (Pajares, 2002).

2.11.1. Basic Principles of Social Cognitive Theory

Bandura (1986) bases his social cognitive theory on six principles including mutual decisiveness, capacity of symbolization, capacity of foresight, capacity of indirect learning, capacity of self-regulation and capacity of self-judgement.

2.11.2. Reciprocal Determinism

According to Bandura (1986), mutual decisiveness consists of individual factors, behaviours and environmental factors, which are cohesive determinants that influence each other, and this interconnection brings new individual behaviours. These factors

operate in a full cycle. Behaviour, environment and individual dispositions can change each other mutually. Bandura (1986) asserts that the reinforcements and punishments exist in the potential environment. However, the individual's behaviour determines whether they come about or not.

2.11.3. Capacity of Symbolization

Human communication is structured on a system of shared meanings referred as language that is based on various symbols. As a result of the thinking process and language use, humans can design past, present and future experiences. Humankind possesses an extraordinary symbolization capacity. Individuals who benefit from their symbolization capacity take information from their environment, guide towards their actions, get new information through reflective thinking, to be able to contact with anyone regardless of time and place (Pajares, 2002).

2.11.4. Capacity of Forethought

Individuals solve cognitive problems, begin to control themselves and forecast by using the symbols they construct. Individuals form their own behaviours and foresight possible outcomes of these behaviours. In the light of these foresights, individuals organize their behaviours, motivate themselves and guide themselves, so they are able to predict the outcomes of a situation even they don't experience it and able to plan alternative strategies (Pajares, 2002).

2.11.5. Capacity of Indirect Learning

Capacity of indirect learning suggests that human not only learn from their experiences, but also by observing others' behaviours. This indirectional learning gives the unique opportunity to learn by observing rather than experiencing the trial and error method. In most situations, indirect learning capacity saves the time and possible mistakes of the individuals (Bandura, 1986).

2.11.6. Capacity of Self-Regulation

Individuals have self-regulation capacity to control their own behaviours. Humans' self-regulation capacity on their acts is closely related with how coherently and

accurately they can observe and examine themselves. In addition, self-regulation capacity is formed by individuals' self-assessments, preferences, contributions and evaluative and concrete responses to their actions (Pajares, 2002).

2.11.7. Capacity of Self-Reflection

According to Bandura (1986), the most distinctive feature of humankind is the talent of self-reflective. By means of this capacity people can infer meanings from their experiences, they discover new cognitive concepts and self-beliefs; they evaluate themselves and change their behaviours accordingly (Pajares, 2002).

2.12. Self-Efficacy

The development of self-efficacy is associated with the characteristics of Bandura's Social Cognitive Theory (1986). Bandura (1995) describes self-efficacy as a belief in one's own ability to organize and perform the behaviours necessary to deal with possible situations he faces. Human is able to develop his self-efficacy beliefs using the capacities detailed above. Zimmerman (1995), on the other hand, defines self-efficacy as a belief that an individual has the necessary skills to accomplish a given task. Self-efficacy is an individual's judgment of his capacities rather than physical, characteristic and psychological characteristics. Likewise, Hoy (2001) also defines that self-efficacy is not linked to how competent an individual is in their skills, but to the belief in their own capacities. Self-efficacy beliefs not only form an important part of individuals' motivation and behaviour, but also affect actions that can change their lives.

According to Lunenburg (2011), self-efficacy is considered as an action-specific version of self-esteem. The basic principle of Self-Efficacy Theory is that individuals are highly likely to perform actions in which they feel sufficient, whereas they are unlikely to perform the actions they think are not enough.

2.13. Sources of Self-efficacy

Individual's beliefs about their personal efficacy constitute a major aspect of their self-knowledge. Self-efficacy beliefs consist of four principal sources of information: enactive master experiences, vicarious experiences, verbal persuasion and physiological and affective states (Bandura, 1997).

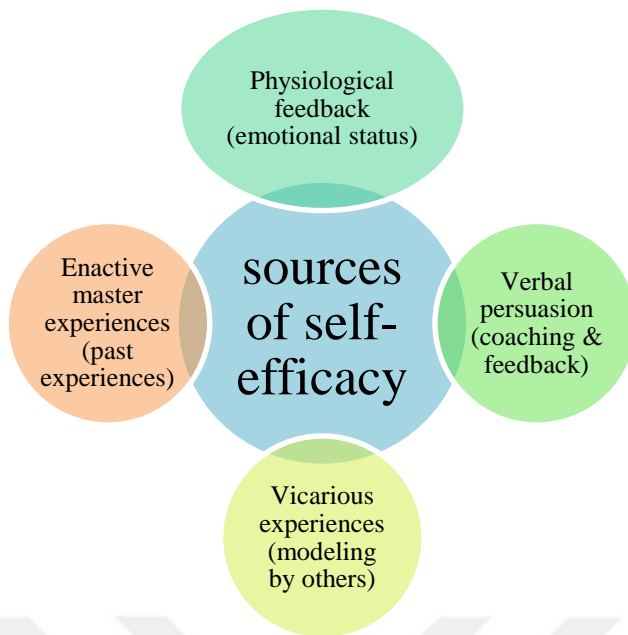


Figure 3: Sources of Self-efficacy

Source: Bandura, 1997, pp.79

2.13.1. Enactive Master Experiences

The most important way to create a strong sense of competence is to have personal experiences. Therefore, the achievements of an individual make a very strong contribution to his self-efficacy perception. Failures inhibit this perception and weaken the perception. If the failure occurs before a solid perception of self-efficacy occurs, it will do more harm. If a person only achieves achievements that are easily achieved, then he quickly enters into expectation, and in the case of failure, his fighting power can easily be broken (Bandura, 1994). In other words, certain disruptions and difficulties in people's work are useful for them to understand that success always requires a continuous effort. After the individual believes that the qualities necessary for success exist in him, he stands upright in the face of difficulties and knows how to get rid of the problems easily. Positive experiences support the formation of self-efficacy belief in the individual for similar situations that he can experience in the future.

2.13.2. Vicarious experiences

Vicarious experiences consist of information obtained by individuals comparing their performances with those of their peers surrounding them. An individual constantly observes the people they consider important in their daily lives and the results of this

observation affect the self-efficacy beliefs of the individual (Bandura, 1994). Bandura (1994) states that teachers develop positive self-efficacy beliefs when they see that their performances are higher than their peers' performances. On the other hand, if teachers observe that their performances are lower than their peers' performances, it leads to negative self-efficacy beliefs.

Another way to build and strengthen the self-efficacy belief is through the indirect experience of social role models. An individual who sees that a role model has succeeded a task through a continuous effort thinks that he can also achieve the same task when he acts in the same way. However, if this role model fails, despite his great efforts, this failure damages the individual's self-efficacy perception and weakens his efforts (Bandura, 1994). The greater the perceived similarity in the role models is, the more convincing the success or failure of the role models is. If individuals perceive that the models they see are different from themselves, their self-efficacy is not affected much by the behaviour of the model.

2.13.3. Verbal persuasion

Social persuasion is the third source that describes the positive impact that our words can have on an individual's self-efficacy. Encouragement and advice about whether an individual can succeed in an activity affects the individual's self-efficacy perception. Unrealistic incentives can lead to a rapid decline in the self-efficacy belief of the individual due to the failure of the individual despite his all efforts (Bandura, 1994). According to Pajares (2002), it is generally easier to decrease the self-efficacy belief of an individual through negative verbal persuasion than to strengthen these beliefs with positive verbal persuasion. In other words, it is more difficult to build a high belief in self-efficacy through social persuasion than to harm it. Bandura (1977) states that unrealistic supportive statements will be frustrating in the event of a disappointment after one's hard efforts. However, individuals who are convinced that they do not have the necessary skills to achieve a task avoid difficult activities that will reveal their potential and easily give up in the face of difficulties.

2.13.4. Physiological Feedback

An individual's level of stress or anxiety influences his self-efficacy perception. A psychologically stable individual is expected to complete a task successfully with high

self-efficacy perception. Accordingly, positive state of mind strengthens self-efficacy belief, while negative emotions such as depression and despair diminish one's belief in his abilities. If people have developed negative and fearful thoughts about their capabilities while carrying out a task, such affective reactions can lead to negative results, as they fear and to decrease the self-efficacy beliefs (Pajares, 2002).

2.14. General Competencies for Teaching Profession

In the year of 2006, general competencies of teachers were determined by the Ministry of National Education in order to train teachers with pre-service and trainings, to select teachers, to get to know the teacher and to guide their career development. The goal of this venture was to determine the competencies of the teachers to make them compatible with the European Union countries. In this sense, the draft "General Competencies for Teaching Profession" was designed after the workshops, pilot practices, and stakeholder views that collected via contribution of national and international experts, academicians, teachers, and various participants. Accordingly, the draft consists of the following six main competency domains, related 31 sub-domains and 233 performance indicators:

- a) Personal and professional values - professional development,
- b) Getting to know the student,
- c) Learning and teaching process,
- d) Monitoring and assessing the learning and development of students,
- e) School, family and community relations,
- f) Curriculum and subject content knowledge (Ministry of National Education, 2017, pp.12).

Considering the importance of self-efficacy as a driving force leading the individual to do a task, it is apparent that teacher self-efficacy is quite effective in having the above competencies and performance indicators.

2.15. Teacher Self-Efficacy

Self-efficacy belief is used to describe the individual differences in teachers' performance in the field of education and makes significant contributions in

understanding and improving teacher behaviour (Riggs and Enochs, 1990). Social cognitive theory proposes that teachers' decisions about classroom practices are directly affected by their sense of capacities (Goddard, Hoy, and Woolfolk-Hoy, 2000). In this sense, the concept of self-efficacy presented in social cognitive theory establishes an important theoretical structure for understanding teachers' behaviours and performance in teaching process.

Tschannen-Moran, Woolfolk-Hoy and Hoy (1998) define teacher self-efficacy as a belief in the capacity of the teacher to influence student performance. In another definition, teacher self-efficacy refers to a teacher's belief in his own teaching ability in relation to his student's achievement level and positive changes in his behaviours (Schriner & Czerniak, 1999). Many studies document that there is a positive relationship between teachers' self-efficacy perception and student achievement. (Bandura, 1993; Goddard, 2001, Goddard, Hoy, and Woolfolk-Hoy, 2000).

Teachers with high self-efficacy beliefs experience less stress and deliver more effective teaching (Chan, 2003) and more encouraged to integrate new implementations (Evers, Brouwers & Tomic, 2002) into their teaching. They tend to use different teaching methods in their teaching practices, conduct research to develop teaching methods they use, use student-centred teaching strategies, and use equipment in their practices (Henson, 2001; Goddard et al., 2000). Besides, Henson (2001) asserts that teachers with a high self-efficacy belief are more likely to try to overcome the problem without compromising their goals when faced with obstacles, and are more likely to remain committed even if they fail.

Conversely, teachers with low self-efficacy beliefs can decrease students' beliefs about their own abilities as well as their cognitive development (Pajares, 2002). Moreover, such teachers are inclined to struggle with occupational stress, including physical and emotional fatigue, loss of self, and a sense of uselessness in individual accomplishments (Gibson and Dembo, 1984). They adopt an approach that deals with students' motivation in a pessimistic manner, implements strict control of classroom behaviour, and promotes students to study with temporary incentives and negative sanctions (Pajares, 2002).

2.16. Technology Acceptance and Adoption Models

The terms “*innovation*” and “*technology*” are often used as synonyms (Rogers, 1983). Many researchers engaged in studies on this subject have proposed different methods on the acceptance and adoption process of technology. The key goal of these models is to determine which internal or external factors are influenced by the intention of use, which is the main factor in the use of technology. Researchers take efforts to explain the behaviours of people to accept and adopt innovations. These models are useful for understanding and evaluating the diffusion of innovation, and making sense of the acceptance of innovation by individuals.

Table 1.

Summary of Technology Acceptance Theories

Model	Constructs/Determinants of behaviour	Theories/Models
TAM (Technology acceptance model)	perceived usefulness, perceived ease of use	(Davis, 1986)
TAM2 (Technology acceptance model 2)	perceived usefulness, subjective norm, image, job relevance, output quality, result demonstrability, voluntariness, experience, perceived ease of use and intention to use	(Venkatesh & Davis, 2000)
TAM3 (Technology acceptance model 3)	perceived usefulness, subjective norm, image, job relevance, output quality, result demonstrability, voluntariness, experience, perceived intention to use, computer self-efficacy, perceptions of external control, computer anxiety, computer playfulness, perceived enjoyment, objective usability	(Venkatesh & Bala, 2008)
TRA (Theory of reasoned action)	attitude towards behavior, subjective norm, behavioral intention and actual behavior	(Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975)
TPB (Theory of planned behaviour)	behavioral attitude, subjective norm, perceived behavioral control, intention and behavior	(Ajzen, 1985)

(Table 1. Continued)

DTPB (Decomposed theory of planned behaviour)	perceived usefulness, perceived ease of use, compability, peer influence and superior's influence, self-efficacy, resource facilitating conditions and technology facilitating conditions	(Taylor & Todd, 1995)
UTAUT (Unified theory of acceptance and use of technology)	performance expectancy, effort expectancy, social influence and facilitating conditions	(Venkatesh et al., 2003)
IDT (Innovation Diffusion Theory)	relative advantage, trialability, observability, compatibility, complexity	(Rogers, 1983, 1995)
SCT (Social cognitive theory)	behavior, environmental factor, personal factor	(Bandura, 1986)

Source: Adapted from Ursavaş, Şahin & McIlroy, 2014, pp.891-892.

Table 1 demonstrates that various models and theories have been developed by various researchers since 1975 regarding the adoption and acceptance of information technologies among people. However, there is no clear conclusion among research (Davis, 1989; Taylor and Todd, 1995; Venkatesh, Morris, Davis, and Davis, 2003) that any of these models is superior to others in explaining the adoption and behaviour of technology use (Ursavaş, Şahin and McIlroy, 2014).

This research is based on the Decomposed Theory of Planned Behaviour (Figure 05) to understand ELT teachers' intention to use Web 2.0 (Taylor & Todd, 1995). The Decomposed Theory of Planned Behaviour originated from theory of planned behaviour (TPB) (Figure 04) (Ajzen, 1991).

2.17. Theory of Planned Behaviour (TPB)

Theory of planned behaviour (TPB) is an extended version of the theory of reasoned action (TRA), which was put forward by Ajzen and Fishbein in the 1970s (Ajzen, 1991). TRA claims that people who behave in a logical way will take into account the information they have in their actions and evaluate the results of that action (Ajzen, 1985). The theory states that the realization of a behaviour depends on the intention to

perform that behaviour, and that the intention is a function of the individual's attitude and subjective norm. Attitudes and subjective norms shape an individual's intention to exhibit a behaviour and this intention determines whether the person will perform the desired behaviour (Ajzen and Fishbein, 1975).

In theory of planned behaviour, the perceived behaviour control added in addition to the attitude and subjective norms. Perceived behaviour control refer to people's perceived ease (or difficulty) of performing a given behaviour (Ajzen, 1991). According to this theory, even though an individual is motivated to perform a behaviour with attitude and subjective norms, a number of organizational conditions may intervene, lead the person not to do the behaviour and affect the intention towards the behaviour (Ajzen, 1991).

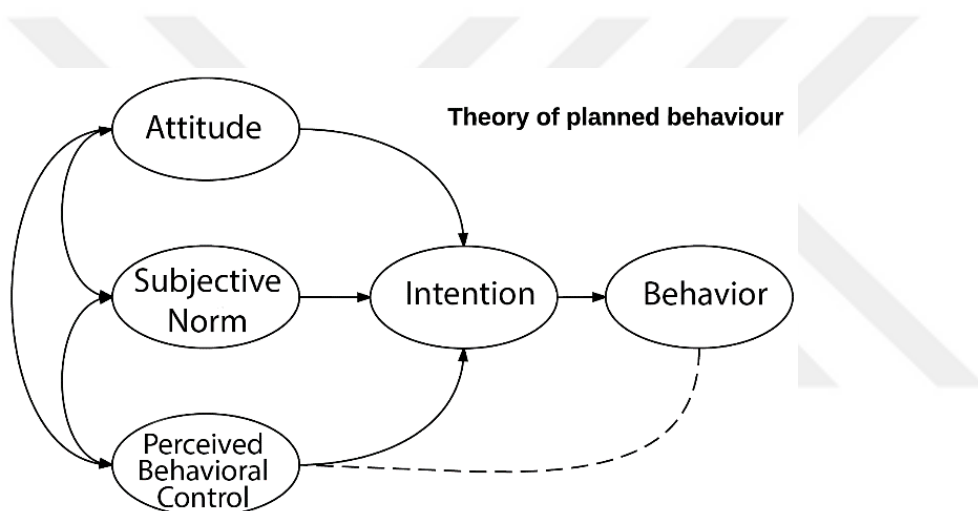


Figure 4: Theory of Planned Behaviour Model

Source: Ajzen, 1991, pp.182

Ajzen and Fishbein (1977) report that attitude towards a behaviour is amongst the important factors. An individual who has positive attitudes towards a behaviour will decide to perform this behaviour. On the other hand, an individual who has negative attitudes towards a behaviour will decide not to perform the behaviour. In their empirical study of theory of planned behaviour, Bentler and Speckart (1979) determine that attitudes have a significant effect on behaviours statistically, and even further, they claim that intention towards behaviour do not play a mediating role in attitude and behaviour relationship.

2.18. Decomposed Theory of Planned Behaviour (DTPB)

Taylor and Todd (1995) introduced the Decomposed Theory of Planned Behaviour (DTPB) to develop TPB. DTPB shares the similar principles with other theories examining technology acceptance and associates behaviour with intention. Taylor and Todd (1995) added new sub-variables (compatibility, environmental impact, self-efficacy, resource-facilitating conditions, and technology-facilitating conditions) that determine attitude, subjective norm, and perceived behavioural control. In doing so, Taylor and Todd (1995) aimed to explain performed behaviour of an individual. In their research Ajjan and Hartshorne (2008) adapted faculty decisions to adopt Web 2.0 technologies. Similarly, this research employs the DTBP developed by Ajjan and Hartshorne (2008).

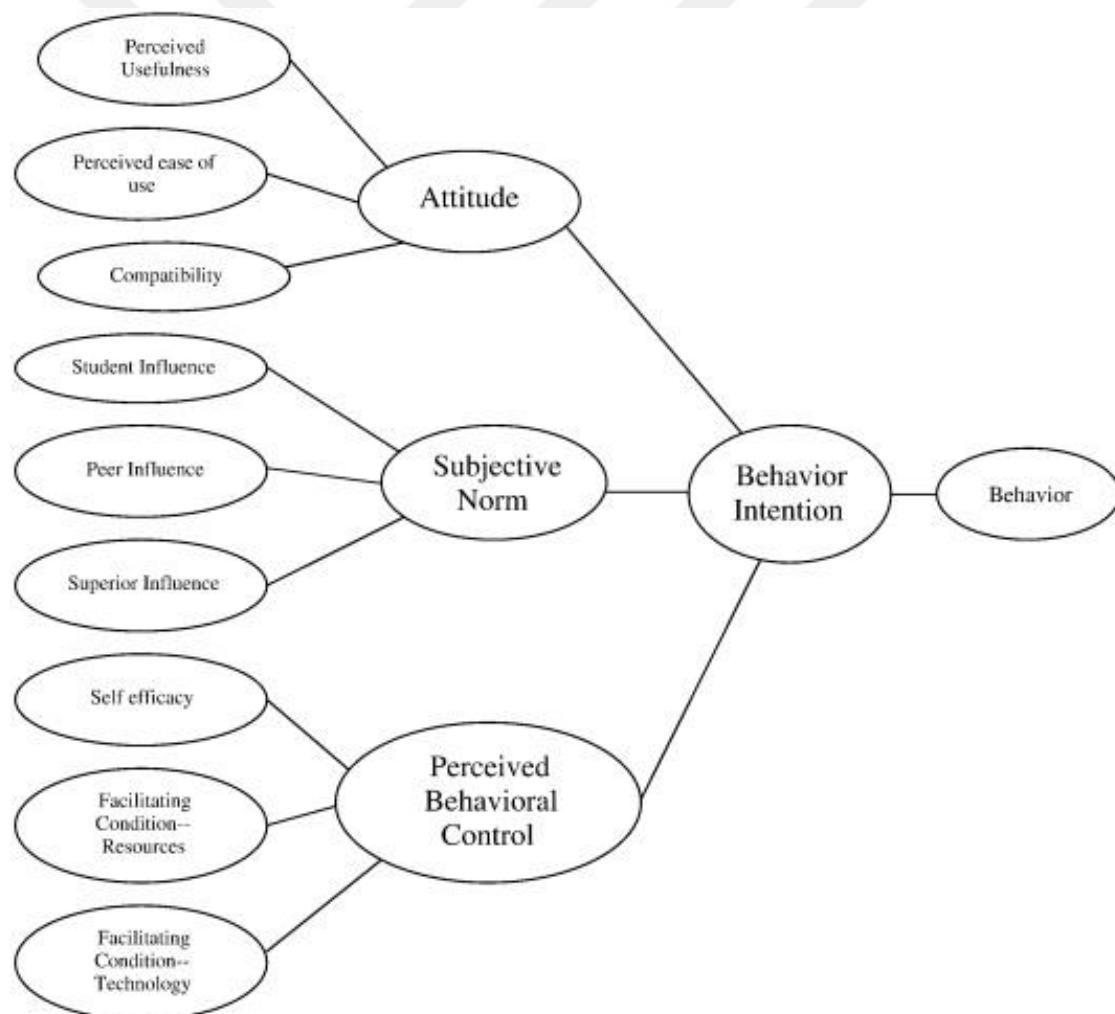


Figure 5. The Decomposed Theory of Planned Behaviour

Source: Ajjan and Hartshorne, 2008, pp.73

Their DTPB includes three main constructs (attitude, subjective norms and behavioural control). Attitude construct consists of three sub variables related to behaviour. These variables are perceived usefulness, perceived ease of use and compatibility. Subjective norms are divided into three sub-constructs: student, peer and superior. The opinions of the two groups were separated in DTPB, as their opinions might differ in using a technology. Perceived behavioural control items are divided into three categories as self-confidence, facilitating condition-resources and facilitating condition-technology.

2.19. Teacher Attitudes towards Web 2.0 tools

Research suggest various definitions about the term attitude. Ajzen and Fishbein (1980) describe the attitude as a tendency to react consistently, positively or negatively to any object presented as a result of learning. Doob (1967) define the attitude as an implicit and motivating response that is thought to be important in the society in which the individual lives. Eagly and Chaiken (1993) interpret the attitude as a psychological tendency to evaluate a certain phenomenon or object to a certain extent, positively or negatively. According to a common definition by many psychologists, attitude is a psychological tendency attributed to an individual and is a psychological tendency that regularly forms his feelings, thoughts and behaviours related to an object (Smith, 1968).

Reviewing the literature about the term attitude, teachers' attitudes towards using technology in education context can be described as a factor that affects to what extend teachers benefit and use the technology in learning-teaching process. In order to integrate Web 2.0 tools effectively into the learning environment, teachers who are most effective agents in the process of teaching must adopt a positive attitude towards technology. In a similar vein, research reports that teacher attitude is one of the most important factors enabling effective use of information and communication technologies in teaching and learning environment (Kreijns, Acker, Vermeulen, and Buuren, 2013; Ramos et al., 2014).

Gabriel and Macdonald (1996) state that the negative attitudes prevailing in schools where tech-savvy students are studying may affect the attitudes of teachers. In their research about the views of teacher trainees and their mentors towards technology usage, Haydn and Barton (2007) document that many teachers do not use technology in the teaching process to increase learning and feel insufficient about using technology in

teaching. This imposes important responsibilities on teachers for the effective use of technology in educational environments. An effective way to solve this issue is to provide teachers with trainings through which they can gain necessary knowledge, skills and positive attitudes towards technology integration. This study postulate that attitudes have a direct effect on behaviours and examines whether or not attitudes of ELT teachers affect their Web 2.0 tools usage behaviours.

2.20. Training (INSET)

In-service teacher training is often referred as one of the main ways wherein teachers continue to improve their knowledge and skills, with direct experience and informal interaction with colleagues (Marker, 1999). Training Department in the MoNE is the responsible organization to arrange and run in-service training programs for teachers who work in primary and secondary schools in the nationwide. The main goals of in-service training are to orientate novice teacher to their schools, fulfil their deficiencies in terms of professional competence, develop teaching approaches, and disseminate knowledge, skills and behaviours required for the innovations and developments in education (Aytaç, n.d.).

Novice teachers receive only a limited experience through a short-term teaching practise called “*internship*” which they attend in their senior year of undergraduate program. That is to say, novice teachers are pushed to enter the class without being fully prepared for various real situations they can face in the classrooms. Given this fact, it is clear that the novice teachers need continuous training, namely, in-service training, in order to overcome the deficiencies of pre-service training.

In today’s world where technological developments are very rapid and have influences on education (Kim, 2007), it has become an obligation to support teachers about their professional development because teachers’ pre-service training can fail to keep up with these rapid changes. Organizing in-service training programs to develop teachers’ profession can make useful contributions in terms of teachers’ adaptation to changes, new tasks and their productivity. Considering the philosophy of lifelong education, it is necessary to provide continuous support to teachers in the field of professional development for qualified educational activities.

ISTE (International Society for Technology in Education) is an organization that studies about incorporating technology into the education. ISTE set standards for teachers

including to be a technology literate, to use technology in its courses, to direct students to use technology, to organize the learning environment in a way that students can use technology and to collaborate with colleagues on the internet (ISTE Standards, 2008). Besides, teacher standards (NETS-T) also road maps to facilitate student learning and encourage creativity, design and develop digital age experiences, create a digital age work and learning model, encourage digital citizenship responsibility model and be involved in leadership and professional development activities (ISTE Standards, 2008).

The introduction of the Movement of Enhancing Opportunities and Improving Technology (FATIH) Project in 2010 and then implementation of the project have elevated importance of teachers' competence related to instructional technologies. Within the scope of this project, as a result of equipping the classrooms with interactive smart boards and internet access, digital platforms such as EBA and DynED were also introduced. In order to keep up with these novelties in the classrooms, teachers are required to receive in-service trainings. Teachers' information technology competence can be considered as a crucial factor for the success of the FATIH Project. Therefore, it can be suggested that the information technology competence levels of the teachers working in the schools where the FATIH project is implemented should be at the level to carry out technology-supported education.

The previous studies find that in-service trainings foster teachers' beliefs of self-efficacy (Faseyitan et al., 1996; Overbaugh & Lu, 2008 as cited in Pan & Franklin, 2011), which assists teachers in implementing technology in their classrooms. Results also recommend that as teachers spend more time in professional development, they build confidence in incorporating technology, as well as their eagerness to utilize technologies in their instruction (King, 2002; Project Tomorrow, 2009a; Wells, & Lewis, 2006, as cited in Pan & Franlin).

In the literature, it is argued that teachers have a key role in the effective integration of learning-teaching processes with technology (Krueger, Hansen & Smaldino, 2000). In this sense, it can be suggested that teachers' instructional technologies competence level have an important place in the process of obtaining successful results in the the FATIH project. The changes and transformations that occur in the educational processes are related to the professional development of teachers (Hardstaffe, Fullan & Hargreaves, 1993). Morrison, Ross, Kalman, and Kemp (2013) argue that the trainings to be conducted within this scope should be based on how these technologies can be integrated into instructional purposes, rather than how to use these

new technological tools for its own sake. Balanskat, Blamire and Kefala (2006) also discuss that the most important obstacle that can be faced in an effective mainstreaming process is the lack of education about how teachers will use technology in the teaching process.



CHAPTER III

METHODOLOGY

3.0. Introduction

The main aim of this chapter is to present the design implemented in this research by referring to the rationale behind data collection and analysis procedures. In this chapter, participant selection of the study and sampling method, research context, data collection and data analysis tools are presented respectively.

3.1. Research Design

The present study implemented a mixed method design, which aims to study the relationship of self-efficacy beliefs, frequency of use and attitudes of the EFL teachers towards Web 2.0 tools. According to Creswell, Clark, Gutmann, and Hanson (2003), a mixed methods research can be defined as to perceive the research problem and to get better and safer results combining both quantitative and qualitative research techniques in one study. Similarly, a mixed method research can help clarify and explain or to explore relationships existing between variables and to confirm or cross-validate relationships discovered between variables (Fraenkel, Wallen & Hyun, 2012).

Quantitative research method seeks to confirm hypotheses about phenomena, and is applied by using tools such as questionnaire or survey; quantifies variation, predicts casual relationships, and describes characteristics of a population in a data format, which is numerical (Burns & Grove, 2005). Put it another way, quantitative research method can be defined as the representation of the observable change or the differences through the systematic, statistical techniques are focused on so that the analysed results can be generalized in the studies based on numbers and statistics (Given, 2008; Fraenkel, Wallen & Hyun, 2012).

Unlike the quantitative research method, qualitative research method focuses on important meanings to be discovered (Neuman, 2013) and revealing how an individual or a group interpret a problem (Creswell, 2014). Likewise, Merriam (2009) asserts that the qualitative research method seeks to present the meaning and understanding of the learning situation and personal reflections of participants (Merriam, 2009) and to deal with understanding situations and events from the viewpoint of the participants (Fraenkel,

Wallen & Hyun, 2012). Accordingly, the qualitative research method can make sense of complex situations, yet it cannot be generalized (Dörnyei, 2007).

Defined in this way, in the quantitative phase of the current research, Turkish state school EFL teachers in Diyarbakır province-Turkey responded to a questionnaire while qualitative data was gathered by semi-structured interviews to get deeper insights of the data results respectively. The participants of the interview were EFL teachers who voluntarily responded to the survey questionnaire beforehand. As a final point, the quantitative and qualitative data were analysed separately, and the latter data were used to give additional basis to the former data.

The role of researcher in quantitative and qualitative data gathering process is different from one another. In quantitative studies, researcher is not a part of the study, in theory, because the data collected through questionnaires and scales, which do not require researcher to actively intervene in the collection process. However, this is not the case in qualitative studies as the researcher is considered as an instrument of data collection (Denzin & Lincoln, 1994). Therefore, the researcher was involved in the study while collecting qualitative data through semi-structured interviews and analysis procedure.

3.2. Sampling and Participants

The study was applied during the spring semester of 2018 and 2019 Academic year in Bağlar, Yenişehir, Kayapınar, and Sur districts of Diyarbakır, Turkey. The study employed two data tools including questionnaire and semi-structured interview. The respondents of the questionnaire were (n=202) EFL teachers from 183 public schools. As for semi-structured data collection, 10 EFL teachers from 10 different schools participated the interviews.

The participants were selected through convenience sampling of nonprobability method because of accessibility and proximity. The convenience sampling involves “choosing the most easily available individuals to serve as respondents and continuing that process until the required sample size has been obtained from those who happen to be available and accessible at the time” (Cohen, Manion, and Morrison, 2007, pp.113). However, since convenience sampling involves choosing those institutions that are flexible and easy to access, a convenience sample might not represent any group separately from itself; it may not be used to generalize the sample to the larger population (Cohen, Manion, and Morrison, 2007). This weakness might produce a bias, but this can

be overcome by using triangulation, in which using different methods for collecting the data within one study will enhance the reliability and validity.

3.3. Data Collection tools

This study investigated self-efficacy beliefs, frequency of use, and attitudes of the EFL teachers towards Web 2.0 tools in the first phase through a questionnaire consisting of four parts with a five-point Likert scale and then deeply investigate reflections of voluntarily selected participants who were EFL teachers, on their experiences of Web 2.0 tools through semi-structured interviews. Both of the tools were implemented in English language.

3.3.1. Questionnaire

According to Dörnyei (2003, pp.1), “questionnaires are uniquely capable of gathering a large amount of information quickly in a form that is readily processable”. The questionnaire (see Appendix 1) of this study included three main instruments. All instruments were merged into one questionnaire in order to reduce the effort in filling out and collecting questionnaires from the respondents.

In the first part of the questionnaire, demographic data was collected from participants (gender, age, teaching experience, university degree, in-service training background, years of use of technology in teaching, years of service in teaching, and the level of education in teaching and the district of service.). The purpose of gathering demographic data was to study the relationship between these variables and the use of Web 2.0 tools by EFL teachers, and their own effectiveness in the use of Web 2.0 tools.

In the second part of the questionnaire, the participants were asked to respond Web 2.0 Tools Integration Instrument (WTII) by Pan & Franklin (2011) to identify and measure the EFL teachers' current use frequency of Web 2.0 tools in language classrooms. There were six items accompanied by a five-point Likert scale with the following labels: “*daily (5)*”, “*at least once a week (4)*”, “*at least once a month (3)*”, “*at least once a year (2)*” and “*never (1)*”. The respondents were required to rate the use frequency of Web 2.0 tools in their classrooms. The Cronbach alpha for this instrument was 0.80., which is considered acceptable parameters for the use of the tools similar result to Pan and Franklin's (2011) study $\alpha=0.78$.

The third part of the questionnaire included Web 2.0 Tools Integration Self-Efficacy Instrument (WTISEI) (Pan & Franklin, 2011). The 27-item WTISEI focused on assessing the level of the EFL teachers' self-efficacy in using Web 2.0 tools in their teachings. There were five items for each Web 2.0 tool accompanied by a five-point Likert scale: "*strongly agree (5)*", "*agree (4)*", "*neutral (3)*", "*disagree (2)*", and "*strongly disagree (1)*". This instrument requested participants to rate their agreement according to statements describing their skill in operating Web 2.0 tools (e.g., "when using Web 2.0 tools in teaching, I feel confident that I can post news or comments on a blog"). In this study, WTISEI obtained a high reliability of Cronbach alpha 0.97 similar result to Pan and Franklin's (2011) study $\alpha = 0.98$.

The final part of the questionnaire involved the Decomposed Theory of Planned Behaviour (DTPB) model to measure attitudes (Ajjan & Hartshorne, 2008) of the EFL teachers towards Web 2.0 tools. The 35-item DTPB instrument consisted of a series of items using a five point Likert-scale (strongly disagree to strongly agree) to examine factors that influence EFL teachers' intentions to utilize Web 2.0 technologies in their classrooms. Items focused on areas of actual usage/behaviour, behavioural intention, attitude, ease of use, perceived usefulness, subjective norms, perceived behavioural control, peer influence, superior influence, student influence, compatibility, facilitating conditions (technology and resources), and self-efficacy. The purpose of utilizing the DTBP was to shed light on the relationship of the antecedents and better understand the agents that influence the adoption or use of new technology (Taylor & Todd, 1995). Therefore, in this study, this model was opted for the explanation of the adoption intention and use of Web 2.0 tools by EFL teachers. The means of Cronbach alpha for the overall scales of this instrument resulted $\alpha = 0.98$.

3.3.2. Semi-structured Interviews

Subsequently, with the purpose of providing in-depth analysis for the quantitative data, semi-structured interviews were conducted with voluntarily selected EFL teachers regarding their self-efficacy beliefs, frequency of use and attitudes towards Web 2.0 tools incorporation in language teaching. The rationale behind the use of a semi-structured interview for this study was to "explore in detail the experiences, motives and opinions of others and learn to see the world from the perspectives other than their own" (Rubin & Rubin, 2012, pp.3). In the pre-interview, questions were constructed in order to gain a

general understanding of the EFL teachers' knowledge regarding Web 2.0 tools. The semi-structured questions in post-interviews were developed in parallel with the research questions. The questions developed by the researcher consists of five components including demographic information; frequency, self-efficacy, attitudes, and decision to adopt Web 2.0 tools. According to the research (Bandura, 1997), personal, environmental, and behavioural factors affect efficacy. Given this fact, several of the semi-structured interview questions served to address various personal, environmental, and behavioural aspects as they related to the participants. Other semi-structured interview questions addressed participants' prior experiences with technology as the research also supports that mastery experiences, or performance accomplishments, and vicarious learning experiences are sources of efficacy (Bandura, 1994).

The interviews conducted with participants provided insightful data since it gave them the opportunity to talk about the things that were outside of quantitative test items. The interviewer chose a non-threatening atmosphere for the interviews and interviewees were not stressed out.

3.4. Reliability and Validity of the Data tools

3.4.1. Questionnaire

In an attempt to verify the validity of the instruments exploited in the study, a pilot study was conducted with a total number of 10 EFL teachers to address the face validity of the items of questionnaire with 5 colleagues. Face validity determines if the instrument appears to be measuring what it intends to measure (Lodico, Spaulding, & Voegtle, 2010). After reviewing, several items were revised slightly to address issues raised by participants concerning ambiguity, wording, and clarity. In doing so, questionnaire items provided a clear and convincing description and were presented in a clear and orderly manner with a truthful, succinct, and complete description. Besides, the questions involved quality, quantity, relevance and manner in order to achieve effective communication. Minor phrasing revisions were incorporated into the final version of the questionnaire that was utilized in the present study.

Reliability means that a test provides consistent measurements (Tuckman, 1999). By measuring the consistency of the responses, the internal consistency can be estimated. In other words, the estimate of internal consistency reliability is to examine the consistency of participants' responses to different items on the same instrument at the

same time (Light, Singer, and Willett, 1990). This study utilized Cronbach's alpha to create a coefficient of internal consistency. In order to decide the internal reliability of the survey instrument, SPSS 24 Edition was used to analyse the data of the study. Table 2 indicates the reliability of the instruments used in the quantitative data.

Table 2.

Reliability of the Instruments

Instruments	Item Numbers	Cronbach's Alpha
W2TII	1-6	0.80
WTISEI	1-27	0.97
DTPB	1-35	0.98

Table 2 summarizes the value of the Cronbach's alpha of the each of the instruments, including Web 2.0 Tools Integration Instrument ($\alpha=0.80$), Web 2.0 Tools Integration Self-Efficacy Instrument ($\alpha=0.97$), and the Decomposed Theory of Planned Behaviour ($\alpha=0.98$) model to measure attitudes, respectively. With the alpha values, the instrument as a whole was considered reliable.

In order to conduct a reliable factor analysis, the sample size needs to be big enough (Field, 2009). The smaller the sample, the bigger the chance that the correlation coefficients between items differ from the correlation coefficients between items in other samples (Field, 2009). Moreover, Field (2009) states that a researcher needs at least 5 to 10 participants per item in the scale. If a factor explains lots of variance in a dataset, variables correlate highly with that factor, hence loading highly on that factor. A factor with four or more loadings greater than 0.6 "*is reliable regardless of sample size.*" (Field, 2009, pp. 647).

The Kaiser-Meyer-Okin measure of sampling adequacy (KMO) can suggest whether the sample size is large enough to reliably extract factors (Field, 2009). When the KMO is near 0., it is difficult to extract a factor. When the KMO is near 1, a factor or factors can probably be extracted, since the opposite pattern is visible. Therefore, KMO "*values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb.*" (Field, 2009. p. 647).

In order to determine the construct validity of the input dataset of Web 2.0 tools Integration Self-Efficacy Instrument (WTISEI) with 27-items, which were responded by 202 participants, a factor analysis was primarily examined through Kaiser-Meyer-Olkin

(KMO=0.94) and Bartlett's test. The KMO value of this input dataset falls within the last category listed above. Besides, the chi-square value ($\chi^2 = 6344.75$) of this dataset obtained with Bartlett's test was found to be significant at ($df=351, p < .001$). Both KMO and Bartlett's tests corroborate the suitability of the factor analysis to dataset. After measuring the suitability of the dataset for factor analysis, VARIMAX rotation was also utilized in principal component analysis (PCA) to establish the sub-scales of the WTISEI.

Table 3.

Factor Loading of Items and Percentage of Explained Variance

<i>Item No</i>	<i>Statements</i>	<i>Factor Load</i>
	<i>When using Web 2.0 tools in teaching, I feel confident that I can...</i>	
Blog	I1 create my own blog (to be accessed by my students as part of a lesson)	0.74
	I2 post news or comments on a blog	0.84
	I3 edit or delete information on a blog	0.79
	I4 add links on a blog	0.76
	I5 upload attached files on a blog	0.80
Wiki	I6 add information on a wiki	0.79
	I7 edit information on a wiki	0.81
	I8 delete information on a wiki	0.83
	I9 revise the information version for what I want on a Wikis (use the history record tool to verify the version I want)	0.76
	I10 upload files to a wiki, such as pictures, PowerPoint, word documents, pdf files, etc.	0.73
Podcast	I11 use computers for create a podcast, such as an mp3 file	0.77
	I12 upload podcast files online	0.74
	I13 download podcast files online	0.79
	I14 use RSS feed to subscribe to podcast files	0.72
Social Networking Sites	I15 create my own social network site	0.64
	I16 post information on social network sites	0.72
	I17 maintain contact with my friends through social network sites	0.84
	I18 invite friends to join my social network site	0.83
	I19 set up profile security levels of my social network site	0.73

(Table 3. Continued)

Image/ Photo Sharing Sites	I20	create an image/photo sharing site account	0.80
	I21	use image/photo sharing sites to upload images/photos online	0.83
	I22	use image/photo sharing sites to edit images/photos (such as add text, resize images, or add tags)	0.79
	I23	use image/photo sharing sites to create a slideshow or video presentation	0.68
Course Managemen t System	I24	use a Course Management Systems to manage classroom materials, such as post a syllabus and curriculum documents	0.84
	I25	arrange a layout of my Course Management Systems site, such as display course material as weekly topics or social issues	0.82
	I26	use a Course Management Systems embedded tools to communicate and interact with my students, such as a blog, wiki, announcement, or chat room	0.76
	I27	use a Course Management Systems to create quizzes for my students online	0.77

The 6 sub-scales, which accounts for the total variance of 84.54%, were extracted as a result of VARIMAX rotation of 27-items. The sub-scales that constitute the same factors are as follows:

- a) Blog
- b) Wikis
- c) Podcasts
- d) Social Networking Sites
- e) Image/Photo Sharing Sites
- f) Course Management Systems

The DTPB instrument produced results of reliability values ranging from $\alpha=0.77$ to $\alpha=0.95$, which is acceptable for exploratory research according to Ajjan & Hartshorne (2008) and Nunnally (1978). Nunnally (1978) reports that research incorporates instruments into basic research should have reliability of .70 or better. According to Ritter (2010), Cronbach's alpha is developed based on the necessity to evaluate items scored in multiple answer categories. A Cronbach test was employed for alpha reliability on each

of the scales in DTPB instrument. A closer inspection of Table 4 indicates Cronbach's alpha reliability as well as means and standard deviations for each of the constructs.

Table 4.

Reliability Analysis of Each Construct the DTPB Model to Measure Attitudes

Construct	α value
Actual usage/behaviour	0.77
Behavioural intention	0.94
Attitude	0.89
Ease of use	0.89
Perceived usefulness	0.95
Subjective norms	0.92
Perceived behavioural control	0.81
Peer influence	0.91
Superior influence	0.93
Student influence	0.92
Compatibility	0.92
Facilitating conditions—technology/resources	0.82
Self-efficacy	0.81
<i>Mean</i>	0.98

As indicated in Table 4., reliability ranged from 0.77 to 0.95, all constructs proved an acceptable reliability ($> .70$) to measure internal consistency of this instrument.

In Exploratory Factor Analysis, the suitability of the data set was investigated. Field (2009) suggests that a researcher needs at least 5 to 10 participants per item in the scale in order to achieve a valid sample size. In this study, data were collected from 202 participants for Exploratory Factor Analysis. The suitability of 13-item scale items for factor analysis was examined with Kaiser-Meyer-Olkin (KMO) and Bartlett test. The KMO value calculated for sample suitability is .92. The Chi-Square value ($\chi^2 = 2519.289$, $SD = 78$, $p < .001$) which was obtained by the Bartlett test was found significant. Both KMO and Bartlett test results show that the data are suitable for factor analysis. Principal components technique and varimax rotation were used for factor analysis. Table 5 presents factor loading of items and percentage of explained variance as follows:

Table 5.

Factor Loading of Items and Percentage of Explained Variance

Factor	Item No	Statements	Factor Load	Variance Explained %
<i>When using Web 2.0 Tools in teaching, I feel confident that I can...</i>				
Perceived Usefulness	PU1	I feel that using Web 2.0 will help my students learn more about the subject	.84	59.82
	PU2	I feel that using Web 2.0 will improve students' satisfaction with the course	.86	
	PU3	I feel that using Web 2.0 will improve students' grades	.87	
	PU4	I feel that using Web 2.0 will improve students' evaluation	.86	
	PU5	To help my students better learn the material, I will incorporate Web 2.0 technologies in the classroom	.76	
Subjective norms	SN1	My peers are using Web 2.0 technologies in their classroom	.81	12.22
	SN2	My superior confirms my ability and knowledge to use Web 2.0 technologies in the classroom	.84	
	SN3	My peers think I will benefit from using Web 2.0 technologies in my classroom	.79	
	SN4	My superior thinks it is important I use Web 2.0 technologies in my classroom	.83	
	SN5	My students thinks it is important I use Web 2.0 technologies in my classroom	.72	
Behavioural Intention	INT1	I plan to use Web 2.0 technologies in my classroom	.89	9.94
	INT2	I intend to use Web 2.0 technologies within the next semester	.85	
	INT3	I will add Web 2.0 technologies to my class next semester	.86	

Table 5 reveals that 13 items fell into under 3 sub-scales which accounts for the total variance of 82.0%. The dimensions sub-scales constitute the same factor are a) Perceived Usefulness (59.82%), b) Subjective Norms (12.22%), and c) Behavioural Intention (9.94%).

The following table indicates fit values for the proposed DTBP model and the extend of values obtained by the Confirmatory Factor Analysis of the Web 2.0 adoption scale.

Table 6.

Fit values for the Proposed Model

Values	Good Fit Values	Acceptable Values	Fit DTPB
X^2/df	$.00 < X^2/df \leq 2$	$2 \leq X^2/df \leq 3$	2.37
RMSEA	$.00 < RMSEA \leq .05$	$.00 \leq RMSEA < .10$.08
RMR	$.00 < RMR \leq .05$	$.05 \leq RMR \leq .08$.04
SRMR	$.00 < SRMR \leq .05$	$.00 \leq SRMR \leq .10$.04
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$.97
NNFI	$.97 \leq NNFI \leq 1.00$	$.95 \leq NNFI \leq .97$.98
CFI	$.95 < CFI < 1.00$	$.95 < CFI < 1.00$.98
GFI	$.95 < GFI < 1.00$	$.90 < GFI < .95$.90

The results, as indicated in Table 6, reveal that the values obtained by the Confirmatory Factor Analysis of the Web 2.0 adoption scale are either good fit or acceptable. The fit index values of the model obtained in CFA tested with 3 latent variables and 13 indicator variables were examined and the Chi-Square value ($X^2 = 147.30$, $n = 202$, $sd = 62$, $p = 0.00$) was found significant. The fit index values were found as $RMSEA = .083$, $RMR = .039$, $SRMR = .041$, $NFI = .97$, $NNFI = .98$, $CFI = .98$, $GFI = .90$.

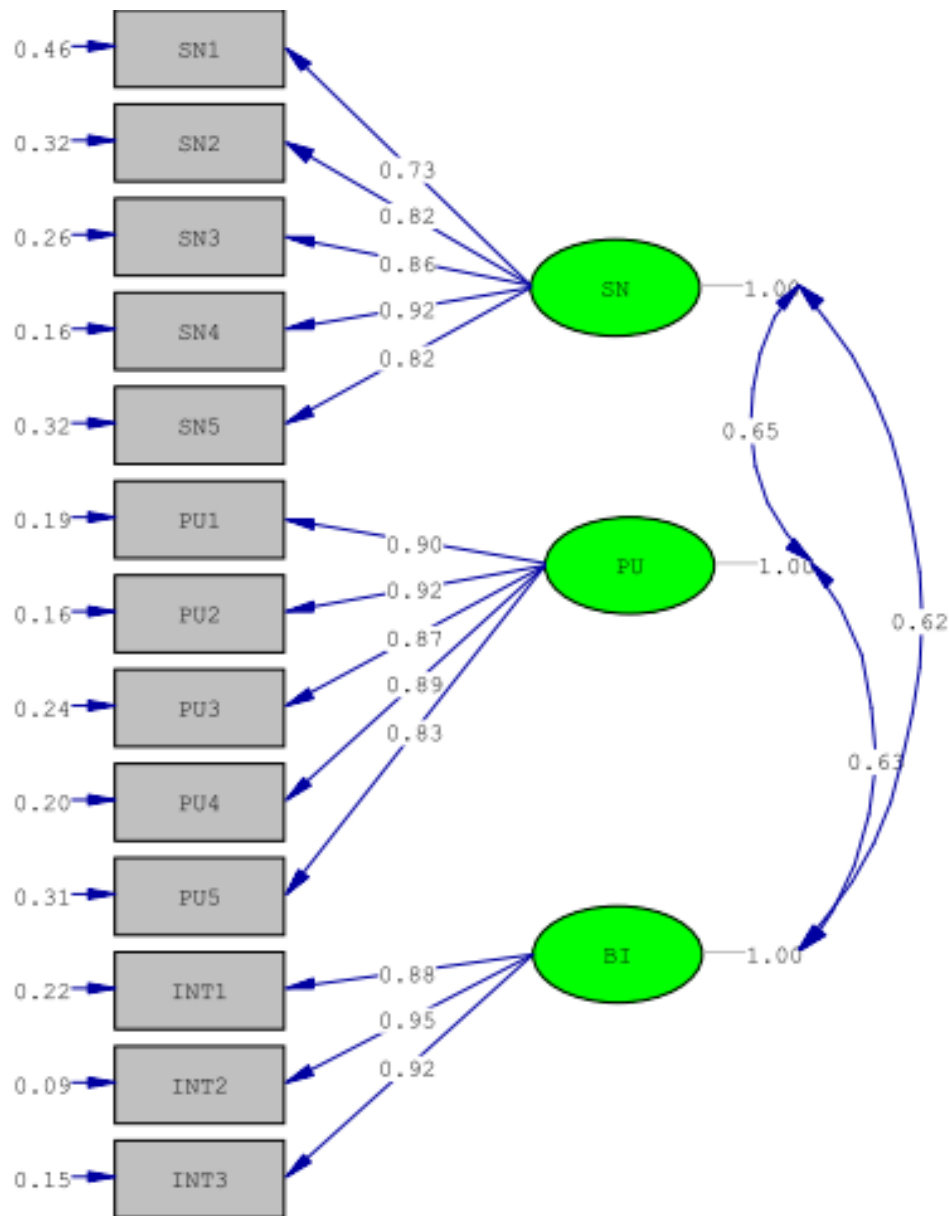


Figure 6. The three-factored latent structure founded with first order CFAs for adoption of Web 2.0 tools using DTBP model.

The three-factored latent construct and factor loads founded with first order CFA for adoption of Web 2.0 tools using DTBP model as the theoretical foundation (scale for the model are presented in Figure 6). Accordingly, INT1 (0.95) item under Behavioural Intention construct has the most impact on adoption of Web 2.0 tools, whereas Subjective norms (0.73) item under Subjective Norms has the least impact. Table 7 presents internal consistency (Cronbach's alpha) of the subscales as follows:

Table 7.

Internal Consistency (Cronbach's Alpha) of the Subscales

Subscales	Item No	α
Perceived Usefulness	5	.95
Subjective Norms	5	.92
Behavioural Intention	3	.94
Total Instrument	13	.94

As given in Table 7., Cronbach's alpha values are .94 for the whole subscales, Perceived Usefulness = .95; Subjective Norms = .92; Behavioural Intention = .94. A large and growing body of literature suggest that scales with reliability coefficients of .70 and above can be considered reliable (Fraenkel, Wallen & Hyun, 2012).

3.4.2. Semi-Structured Interview

In order to employ a valid and reliable qualitative data procedure, a pilot study with three volunteer participants and member-checking procedures were employed to seek objective opinions as to how semi-structured interview questions could be made easier to understand, avoid bias or leading questions and/or avoid any potential ambiguity. After member-checking, several items were revised slightly to address issues raised by participants concerning ambiguity, wording, and clarity. In doing so, the semi-structured interview questions provided a clear and convincing description and were presented in a clear and orderly manner with a truthful, succinct, and complete description. Besides, the questions involved quality, quantity, relevance and manner in order to achieve effective communication. Minor phrasing revisions were incorporated into the final version of the semi-structured interview that was utilized in the present study.

Kirk and Miller (1986) posited validity as a phenomenon that researcher is studying as objectively as possible. In the present study, in order to ensure internal validity of the qualitative data set, the following steps have been taken: first, the findings of the research have been corroborated with the previous studies. Second, the findings are organized in a way that is consistent and unified in itself. Finally, to ensure the external validity of the research; the sample, setting, and data collection processes of the research are explained in detail.

In qualitative research, reliability refers to the repeatability of the research results obtained. External reliability is related to whether the results of the research can be

obtained in the same way in similar settings, and internal reliability is associated with whether other researchers can achieve the same results using the same data set (LeCompte and Goetz, 1982).

In order to ensure internal reliability of the qualitative data, the following steps has been taken. First, the researcher has stated his position in the research as the role of the researcher merely who conducted the interview and analysed the data. Second, the variables regarding the participants in the research are clearly indicated. Third, data collection and data analysis procedure are explained in detail. Fourth, in order to maintain internal reliability, the direct quotations from the semi-structured interview is given without any objective changes. Giving direct quotations can increase the validity and reliability of qualitative data (Neuman, 2013). Finally, while analysing data, the theoretical framework based on the previous studies related to current research and other research findings was compared.

3.5. Data Collection Procedure

Data collection process commenced during the spring semester of 2018 and 2019 academic years. Prior to gathering data, permission to use the instruments was obtained from the developers and researchers. Next, the Provincial Directorate for National Education, Diyarbakır-Turkey was contacted to obtain permission (see Appendix 3) to gather data from the volunteer EFL teachers who work in public schools in Bağlar, Sur, Kayapınar, and Yenişehir districts of Diyarbakır, Turkey. Then a pilot study was carried out two weeks ahead of the main study. The rationale behind conducting the pilot study was to see if the questionnaire and semi-structured interview questions were in appropriate length, the items and wording were clear enough without leaving any questions in mind. The piloting of questionnaire was conducted with 10 EFL teachers who work in public schools in the central districts of Diyarbakır province. It took approximately 15 minutes to answer the questionnaire questions. After the pilot study, a few changes were made in wording. Statistical Package for Social Sciences (SPSS) 24.0 Edition was utilized to analyse the responses.

The pilot semi-structured interview was carried out with three volunteer participants prior to the main interview. They did not take part in the main data collection. The interview took place at teachers' room of the school where the volunteer teachers work and lasted for 25-30 minutes. Moreover, the interview was audio recorded. After

appropriate feedback and pilot study of the interview, some questions were improved and rewritten to make them more clearly comprehended for the interviewees.

As for the main data collection, the schools were randomly selected to gather data from the volunteer participants. First, quantitative data was collected via survey questionnaire (see Appendix 1) in the schools settings of the 202 participants from 183 schools between March 1 and June 1 in 2019, which took approximately 15 minutes for respondents to answer the items in the questionnaire. Then, semi-structured interviews (see Appendix 2) were conducted with 10 EFL teachers from the survey questionnaire group all of who work in different public schools in the academic year of 2018 and 2019. Before the semi-structured interview took place, all the participants were asked if they would like to take part in the study. Ten EFL teachers were volunteer to participate the interviews. The researcher visited them in their schools and the interview was audio recorded within a certain amount of time ranging from 25 minutes to 42 minutes.

3.6. Data Analysis

In this study, mixed method design was applied for acquiring both quantitative and qualitative data in order to minimize possible problems that might stem from applying a single method. Mixed method research focuses on collecting, analysing and mixing both quantitative and qualitative data in order to better understand research problems (Creswell, 2014). Tashakkori and Tedlie (1998, as cited in Creswell, 2014) accentuate that results from one method can help identify participants to study or questions to ask for the other method. Alternatively, the qualitative and quantitative data can be merged into one large database or the results used side by side to reinforce each other (Creswell, 2014). In line with this view, the statistical data is supported with the results of the semi-structured interview in this study. Thus, the data from this study are analysed separately as being quantitative or qualitative.

3.6.1. Quantitative Data

The background questionnaire and scales were administered to the participants during the Academic Year of 2018 and 2019 after obtaining written permission from the authors, the authorities of the office of Education Ministry, and the respective schools' faculty and administrations. The data collected were analysed using the SPSS software. Before giving the descriptive interpretation of the data, the reliability coefficients and

total variances were computed. The reliability coefficients of the scales were computed in Cronbach's Alpha, and the values indicated a high level of reliability, as shown in Table 2. As the study included three scales, the factor analyses were performed separately.

3.6.2. Qualitative Data

Qualitative data was gathered through semi-structured interview. The interviews were carried out with 10 volunteer participants, from 10 different schools, who took part in quantitative data collection procedure. The interviews were applied online through Skype in English. In order for the interviews to be reliable, the interviews were recorded with a mobile phone recorder app and the data obtained were transferred to the Microsoft Word 2016 MSO (16.0.4639.1000). Table X summarised the demographic information about the interviewees.

Content analysis method was used for the data the analysis after reading the transcription several times. Data analysis includes coding and grouping the codes and themes selected from the statements of participants (Creswell, Plano Clark, Gutmann, and Hanson, 2003). According to Eysenbach and Köhler (2002), the content analysis process includes (1) the process of coding data, (2) finding codes, categories and themes, (3) organizing codes, categories and themes, and (4) defining and interpreting the findings. Given a gist of the literature, the qualitative data analysis process includes organizing the data, pre-reading the data set, organizing themes and coding in a clear way, presenting the data and interpreting them accordingly.

In this study, the themes were determined beforehand according to the theoretical framework, the codes were arranged under these themes. The codes were determined by considering the similar expressions noticed during the reading of the transcribed data. The codes were fixed by taking into account of the similar expressions that were identified in the statements made by the participants. Then, the codes were arranged under the themes and presented theoretically. Direct quotations from the participant responses were also given to support the identified themes. Therefore, to keep the participants' identity confidential, each interview form was coded with a number of the participant such as "P.1., P.2..." rather than the participant's real name.

CHAPTER IV

FINDINGS AND RESULTS

4.0. Introduction

In this chapter, the findings related to EFL Teachers' self-efficacy beliefs, frequency of use, and attitudes towards Web 2.0 tools are presented and discussed in detail. The researcher aimed to attain a deeper understanding of the phenomenon by implementing both quantitative and qualitative methods along with triangulation of qualitative data. Collection of data was in two phases: In the first phase, 5-point Likert scale was administered to collect quantitative data. In the second phase of the study, qualitative data were collected through semi-structured interviews applied to English teachers. The quantitative phase covers descriptive statistics and the qualitative phase included content analysis. Findings of the questionnaire are presented in tables and evaluated quantitatively. Qualitative data regarding teacher interviews are also presented.

Research questions of the present study constitute the organization of this chapter. The quantitative data were analysed in SPSS 24.0 Edition software packages. The qualitative data were collected through semi-structured interviews. Thematic analysis some of which were developed for the semi-structured interviews by the researcher was administered.

4.1. The Findings of the Quantitative Data

4.1.1. Descriptive Analysis Regarding the Characteristics of the Participants

The first section of the instrument was the demographic inventory created for acquiring participants' demographic characteristic. Information on participants' gender, age, teaching experience, education degree, school they teach, and district of the school they teach were gathered in this section. Table 8 presents the demographic information of the participants as follows:

Table 8.

Demographic Variables of the Respondents to the Questionnaire

Variables	Properties	N	%
Gender	Male	88	43,6
	Female	114	56,4
	<i>Total</i>	202	100,0
Age Groups	21-24 ages	13	6,4
	25-29 ages	69	34,2
	30-34 ages	48	23,8
	35-39 ages	34	16,8
	40-44 ages	25	12,4
	45-49 ages	5	2,5
	50-54 ages	4	2,0
	55 and over	4	2,0
	<i>Total</i>	202	100,0
Teaching Experience	0-5 years	75	37,1
	6-10 years	47	23,3
	11-15 years	40	19,8
	16-20 years	28	13,9
	21 and above	12	5,9
	<i>Total</i>	202	100,0
Education degree	Graduate	182	90,1
	Postgraduate	20	9,9
	<i>Total</i>	202	100,0
Level of school	Primary School	60	29,7
	Secondary School	83	41,1
	High School	59	29,2
	<i>Total</i>	202	100,0
District of the school	Bağlar	62	30,7
	Kayapınar	55	27,2
	Sur	42	20,8
	Yenişehir	43	21,3
	<i>Total</i>	202	100,0

As accentuated in Table 8, the total number of the participants who responded to the questionnaires was 56.4% identified as female and 43.6% reported as male. Based upon the information presented in Table 8, the highest percentage (34.2%) of the age group of the participants is between 25-29 years old, whereas the lowest percentage (2.5%) of the age ranges are between 50 and over. As given in Table 8, the teaching experiences of the participants were 0-5 years (37,1%), 6-10 years (23,3%), 11-15 years (19,8%), 16-20 years (13,9%), 21 and above (5,9%). According to Table 8, 90,1% of the

participants reported that they held a bachelor degree, whereas 9,1% of them reported to have an MA or a PhD degree. Table 8 also reports that 29,7% of the participants worked in primary schools, 41,1% in secondary schools, and 29,2% in high schools. Finally, as given in Table 8, 30,7% of the respondents reported that they worked in Bağlar district, 27,2% in Kayapınar, 20,8% in Sur and 21,3% in Yenişehir.

4.1.2. Research Question 1

To what extent do EFL teachers incorporate Web 2.0 tools into their classroom teaching?

In order to answer the first question of the extend EFL teachers incorporate Web 2.0 tools into their classroom teaching, the frequencies and percentages of participant responses about the use of each of the Web 2.0 tools were calculated. Table 9 indicates participants' responses to their frequency of using various Web 2.0 tools.

Table 9.

Frequency and Percentage of Participants' use of Web 2.0 Tools

Frequency of Use	Blogs		Wikis		Podcasts		SNSs		IPs		CMSs	
	n	%	n	%	n	%	n	%	n	%	n	%
Never	42	20.9	53	11.5	60	30.0	48	23.9	51	25.4	73	36.5
At least once a year	18	9.0	23	30.5	25	12.5	25	12.4	31	15.4	29	14.5
At least once a month	41	20.4	61	22.5	48	24.0	25	12.4	42	20.9	46	23.0
At least once a week	75	37.3	45	9.0	46	23.0	47	23.4	46	22.9	30	15.0
Daily	25	12.4	18	10.0	21	10.5	56	27.9	31	15.4	22	11.0
Total	201	100.0	200	100.0	200	100.0	201	100.0	201	100.0	200	100.0

Table 9 indicates the extent of usage of Web 2.0 tools. According to the findings gathered, many of the participants reported that they were using Blogs (n=75) at least once a week, Wikis (n=61) at least once a month, and SNSs (n=56) on daily basis, whereas they never used the Podcasts (n=60), IPs (n=51), and CMSs (n=73).

When Table 10 examined, the participants, in general, reported a medium frequency of using Web 2.0 tools: the mean of the average of these Web 2.0 tools was 2.86 ($SD=.99$), which indicates that EFL teachers inclined to the response of “At least once a month” in terms of using these tools.

Table 10 indicates information about the participants and their use of Web 2.0 tools.

Table 10.

Mean scores and Standard Deviations on Frequency and Percentage of Participants' Use of Web 2.0 Tools

Items	Mean	Std. Deviation
Blogs	3.11	1.34
Wikis	2.76	1.31
Podcasts	2.72	1.38
Social Networking Sites	3.19	1.55
Image Photo Sharings	2.88	1.42
Course Management Systems	2.50	1.40

As indicated in Table 10, information about the participants and their use of Web 2.0 tools is observed as the highest in 3.19 for Social Networking Sites ($m=3.19$), Blogs ($m=3.11$). This degree slightly slows down in 2.88 for Wikis ($m=2.76$), Podcasts ($m=2.72$), Image/photo sharing sites ($m=2.88$), whereas it is the lowest in Course Management Systems ($m=2.50$).

4.1.3. Research Question 2

Is there a significant difference between the self-efficacy beliefs of the EFL teachers and their Web 2.0 tools usage according to the following demographic variables?

The results of the research are related with the self-efficacy levels of the EFL teachers towards Web 2.0 tools in regards to their demographic variables. Table 11 indicates Mann Whitney-U test results of the self-efficacy levels of the EFL teachers according to their gender.

Table 11.

Mann Whitney-U Test Results of the Self-Efficacy Levels of the EFL Teachers According to Their Gender

Construct	Gender	n	Mean Rank	Sum of Ranks	U	Z	p
Blogs	Male	88	100.04	8803.50	4887.5	-.313	.754
	Female	114	102.63	11699.50			
Wikis	Male	88	97.02	8538	4622.0	-.963	.335
	Female	114	104.96	11965			
Podcasts	Male	88	98.01	8624.5	4708.5	-.751	.452
	Female	114	104.2	11878.5			
SNSs	Male	88	99.93	8794	4878.0	-.337	.736
	Female	114	102.71	11709			
IPSs	Male	88	98.72	8687	4771.0	-.602	.547
	Female	114	103.65	11816			
CMSs	Male	88	99.66	8770	4854.0	-.396	.692
	Female	114	102.92	11733			
Total	Male	88	98.11	8633.5	4717.5	-.725	.469
	Female	114	104.12	11869.5			

The results of the Mann-Whitney U test in Table 11 did not indicate any statistically significant difference ($p > .05$) between the self-efficacy levels of male ($n=88$) and female ($n=114$) EFL teachers towards Web 2.0 tools including Blogs, Wikis, Podcasts, Social Networking Sites, Image/Photo Sharings, and Course Management Systems.

Table 12 presents the Kruskal-Wallis H test results of the self-efficacy levels of the EFL teachers towards Web 2.0 tools according to their age group.

Table 12.

Kruskal-Wallis H Test Results of the Self-Efficacy Levels of the EFL Teachers Towards Web 2.0 Tools According to Their Age Group.

	Blogs	Wikis	Podcasts	SNSs	IPSs	CMSs	WTISE
n	202	202	202	202	202	202	202
χ^2	11.17	14.33	18.04	22.13	10.18	4.78	18.59
df	6	6	6	6	6	6	6
p	.08	.03	.01	.00	.12	.57	.00

As revealed in Table 12, a Kruskal-Wallis H test was performed to determine the significant difference in each construct of WTISE instrument according to age groups. Table 13 further asserts the tests results of Kruskal-Wallis in accompanying with the self-efficacy levels of the EFL teachers towards Web 2.0 tools according to their age group. The p level is observed as .08 for Blogs, .03 for Wikis, .01 for Podcasts, .00 for SNSs, .12 for IPSs, .57 for CMSs, and finally, .00 for WTISE.

Pairwise comparisons were conducted using the Mann-Whitney U test in Table 13 in order to yield identical results with the Kruskal-Wallis test used in Table 12.

Table 13 presents Mann-Whitney U test results of WTISE scores by age groups of the respondents.

Table 13.

Mann-Whitney U Test Results of WTISE Scores According to Age Groups of the Participants

	Age Groups	n	Mean Rank	U	Z	p
SNSs	21-24	13	32.58	109.500	-2.673	0.008
	35-39	34	20.72			
WTISE	21-24	13	31.00	130.000	-2.167	0.030
	35-39	34	21.32			
SNSs	21-24	13	27.35	60.500	-3.159	0.002
	40-44	25	15.42			
WTISE	21-24	13	26.12	76.500	-2.648	0.008
	40-44	25	16.06			
Podcasts	21-24	13	14.00	13.000	-2.843	0.004
	50 +	8	6.13			
SNSs	21-24	13	14.08	12	-2.931	0.003
	50 +	8	6.00			
WTISE	21-24	13	13.92	14	-2.755	0.006
	50 +	8	6.25			
SNSs	25-29	69	51.19	608.000	-2.189	0.029
	40-44	25	37.32			
Podcasts	25-29	69	41.49	104.000	-2.896	0.004
	50 +	8	17.50			
SNSs	25-29	69	40.78	153.500	-2.058	0.040
	50 +	8	23.69			
WTISE	25-29	69	40.72	157.000	-1.987	0.047
	50 +	8	24.13			
SNSs	30-34	48	48.06	501.000	-2.988	0.003
	35-39	34	32.24			

(Table 13. Continued)

WTISE	30-34	48	46.54	574.000	-2.279	0.023
	35-39	34	34.38			
SNSs	30-34	48	42.94	315.000	-3.333	0.001
	40-44	25	25.60			
WTISE	30-34	48	42.23	349.000	-2.919	0.004
	40-44	25	26.96			
Podcasts	30-34	48	31.35	55.000	0.001	0.001
	50 +	8	11.38			
SNSs	30-34	48	30.90	77.000	0.007	0.007
	50 +	8	14.13			
WTISE	30-34	48	31.09	67.500	0.004	0.004
	50 +	8	12.94			
Podcasts	35-39	34	18.47	33.000	-2.209	0.027
	45-49	5	30.40			
Podcasts	35-39	34	24.04	49.500	-2.792	0.005
	50 +	8	10.69			
WTISE	35-39	34	23.50	68.000	-2.181	0.029
	50 +	8	13.00			
Podcasts	40-44	25	18.90	52.500	-2.010	0.044
	50 +	8	11.06			

As indicated in Table 13, Mann-Whitney U test results of WTISE scores are compared according to age groups of the participants. The results revealed that EFL teachers who used Podcasts ($p < .01$) and SNSs ($p < .00$) showed the significant difference ($p < .05$). There is a significant ($p < .05$) difference in WTISE scores of participants according to their age group.

Table 14 accentuates Kruskal-Wallis H test results of WTISE scores regarding the levels of self-efficacy in using We 2.0 tools according to teaching experience years of the participants.

Table 14.

Kruskal-Wallis H Test Results of WTISE Scores According to Teaching Experience Years

	Blogs	Wikis	Podcasts	SNSs	IPSs	CMSs	WTISE
n	202	202	202	202	202	202	202
χ^2	3.386	4.797	7.432	8.786	4.587	.697	4.649
df	4	4	4	4	4	4	4
p	.495	.309	.115	.067	.332	.952	.325

The analysis results presented in Table 14 demonstrate that the levels of self-efficacy in using Web 2.0 tools depending on the teaching experience years of the EFL teachers who participated in the study does not statistically significantly differ (chi square = 4.649, $p = .325$, $df = 4$). Even though it is not statistically significant, the level of self-efficacy towards using SNSs can be regarded significant as it is .067.

Table 15 reveals the levels of self-efficacy in using Web 2.0 tools with regards to the university degree of the participants by applying Mann-Whitney U test results of WTISE scores.

Table 15.

Mann-Whitney U Test Results of WTISE Scores According to University Degree of the Participants

Constructs	Degree	n	Mean Rank	Sum of Ranks	U	Z	p
Blogs	Bachelor	182	101.34	18443.00	1790.000	-0.121	0.903
	Postgraduate	20	103.00	2060.00			
Wikis	Bachelor	182	100.77	18340.50	1687.500	-0.538	0.591
	Postgraduate	20	108.13	2162.50			
Podcasts	Bachelor	182	100.41	18274.00	1621.000	-0.807	0.419
	Postgraduate	20	111.45	2229.00			
SNSs	Bachelor	182	101.57	18486.50	1806.500	-0.055	0.956
	Postgraduate	20	100.83	2016.50			
IPSs	Bachelor	182	100.62	18313.00	1660.000	-0.653	0.514
	Postgraduate	20	109.50	2190.00			
CMSs	Bachelor	182	99.74	18152.50	1499.500	-1.302	0.193
	Postgraduate	20	117.53	2350.50			
WTISE	Bachelor	182	100.36	18266.00	1613.000	-0.834	0.404
	Postgraduate	20	111.85	2237.00			

When Table 15 is analysed, the levels of self-efficacy in using Web 2.0 tools with regards to the university degree of the participants does not statistically significantly different ($p > .05$).

Table 16 indicates the relationship between self-efficacy levels of the EFL teachers and years of experience in using a device connected to the Internet.

Table 16.

Kruskal-Wallis H Test Results of WTISE Scores According to Years of Experience in Using A Device Connected to the Internet

	Blogs	Wikis	Podcasts	SNSs	IPSs	CMSs	WTISE
n	200	200	200	200	200	200	200
χ^2	6.797	2.135	3.264	3.791	4.592	10.401	2.978
df	4	4	4	4	4	4	4
p	.147	.711	.515	.435	.332	.034	.561

As its results shown in Table 16, Kruskal-Wallis H test was conducted to determine the relationship between self-efficacy levels of the EFL teachers and years of experience in using a device connected to the Internet. A significance level of $.05/5 = .01$ was adopted following Bonferroni correction. Accordingly, the results illustrate that there is no statistically significant ($p > .05$) difference with respect to the years of experience of using a device connected to the Internet. There is no significant ($p > .05$) difference in mean scores of WTISE and subscales according to years of experience in using a device connected to the Internet.

Table 17 reports the levels of self-efficacy in using Web 2.0 tools depending on the participants' school they serve.

Table 17.

Kruskal-Wallis H Test Results of WTISE Scores According to School Level the Participants Serve

	Blogs	Wikis	Podcasts	SNSs	IPSs	CMSs	WTISE
n	202	202	202	202	202	202	202
χ^2	.414	.311	.418	.029	.965	.302	.140
df	2	2	2	2	2	2	2
p	.813	.856	.811	.986	.617	.860	.932

The analysis results presented in Table 17 report that the levels of self-efficacy in using Web 2.0 tools depending on education level the participants teach does not statistically significantly ($p > .05$) differ. There is also no significant ($p > .05$) difference in mean scores of WTISE and sub dimensions according to school level the participants serve.

4.1.4. Research Question 3

Is there a relationship between the attitudes of the EFL teachers and their Web 2.0 tools usage according to the following demographic variables?

Descriptive statistics involving means and standard deviations were used to determine the attitudes towards adopting Web 2.0 technologies. Items focused on areas of actual usage, behavioural intention, attitude, ease of use, perceived usefulness, subjective norms, perceived behavioural control, peer influence, superior influence, student influence, compatibility, facilitating conditions (technology and resources), and self-efficacy. Table 18 reveals mean scores and standard deviations of these constructs.

Table 18.

Mean Scores and Standard Deviations of Decomposed Theory of Planned Behaviour (DTPB)

Constructs	Mean	Std. Deviation
Actual usage/behaviour	3,70	0,82
Behavioural intention	3,51	0,94
Attitude	3,88	0,85
Ease of use	3,63	0,89
Perceived usefulness	3,90	0,85
Subjective norms	3,40	0,85
Perceived behavioural control	3,45	0,96
Peer influence	3,49	0,88
Superior influence	3,54	0,93
Student influence	3,63	0,91
Compatibility	3,72	0,90
Facilitating conditions	3,53	1,01
Self-efficacy	3,50	0,86
Valid N (listwise)		

The results presented in Table 18 confirm that teachers have positive attitudes towards using Web 2.0 technologies in learning process. Participants report that using Web 2.0 tools is a good idea ($m=4,00$), helps their students learn more about the subject ($m=3,97$), and improves students' satisfaction with the course ($m=3,96$). Besides, they indicate that Web 2.0 is useful in their teaching ($m=3,88$); therefore, they would

incorporate Web 2.0 tools in their lessons to help their students better learn English (m=3,86).

An independent samples t-test in Table 19 was implemented to compare the attitudes and gender of the participants because data revealed normal distribution.

Table 19.

Comparison of Attitudes With Respect to the Participants' Gender

	n	m	SD	t	df	p
male	88	3.5938	.77803	-.392	200	.696
female	114	3.6336	.66221			

*p<.05

The results in Table 19 revealed that there were not any significant differences in DTPB scores of the EFL teachers ($t(200) = -.392$, $p > .696$ two-tailed) based on their gender, female (m=3.633, SD=.662) and male (m=3.953, SD=.778) towards the use of Web 2.0 tools.

Table 20 indicates the Kruskal Wallis H test results of the attitudes of the EFL teachers' in regards to on their age groups.

Table 20.

Comparison of Attitudes Depending on to the Participants' age Groups

Age cohort	n	Mean Rank	Sd	χ^2	p
21-24 ages	13	107.42			
25-29 ages	69	99.75			
30-34 ages	48	112.76			
35-39 ages	34	103.22	1.506	6.131	.409
40-44 ages	25	91.08			
45-49 ages	5	102.90			
50+	8	63.81			

*p<.05

The analysis of Kruskal Wallis H test results presented in Table 20 reveals that the DTPB scores of the EFL teachers did not differ significantly ($\chi^2=6.131$, $p > 0.05$) depending on age group they belong to.

Table 21 reveals the Kruskal Wallis H test results of the attitudes of the EFL teachers' based on their teaching experience years.

Table 21.

Comparison of Attitudes Depending on the Participants' Teaching Experience Years

Experience of years	n	Mean Rank	Sd	χ^2	p
0-5 years	75	104.51			
6-10 years	47	103.79			
11-15 years	40	98.80	1.260	1.381	.848
16-20 years	28	100.77			
21+	12	84.46			

* $p < .05$

As indicated in Table 21, Kruskal-Wallis H test was performed to determine if there were significant differences in DTPB score of the participants and their duration of teaching experience. The analysis of results indicates that the DTPB scores of the EFL teachers did not differ significantly ($\chi^2=1.138$, $p>.05$) with respect to their years of teaching experience.

Table 22 presents the results of the attitudes of the EFL teachers in terms of their university degree.

Table 22.

Comparison of Attitudes With Respect to the Participants' University Degree

	n	m	SD	t	df	p
Graduate	182	3.5912	.72135	-1.511	200	.07726
Postgraduate	20	3.8443	.60520			

* $p < .05$

As indicated in Table 22, the results of the DTPB scores suggest that both graduate ($m=3.5912$, $SD=.72135$) and postgraduate ($m=3.8443$, $SD=.60520$; $t(200) = -1.511$, $p>.07726$ two-tailed) EFL teachers' attitudes were not significantly different from each other towards Web 2.0 tools.

Table 23 expresses comparison of attitudes according to the participants' in-service teacher training (INSET) background including the FATIH, EBA, and IWB.

Table 23.

Comparison of Attitudes According to the Participants' In-Service Teacher Training (INSET) Background – the FATIH, EBA, and IWB

		n	\bar{X}	SD	t	df	p
FATIH	attended	108	3.50	0.66	-2.33	200	0.02
	not attended	94	3.74	0.75			
EBA	attended	99	3.52	0.67	-1.80	200	0.07
	not attended	103	3.70	0.74			
IWB	attended	101	3.48	0.63	-2.70	200	0.01
	not attended	101	3.75	0.77			

* $p < .05$

The analysis of independent t-test results given in Table 23 indicates that the DTPB scores of the EFL teachers differed significantly ($p < .05$) with respect to their experience in the in-service teacher training within the context of FATIH project and IWB, where EBA scores did not show any significant ($p > .05$) difference in respect to the participants' experience in the in-service teacher training.

Table 24 reveals attitudes of the EFL teachers according to their in-service teacher training (INSET) background – DYNED.

Table 24.

Mann-Whitney U test Results of Attitudes According to the Participants' In-Service Teacher Training (INSET) Background - DYNED

	n	Mean Rank	Sum of Ranks	U	Z	p
attended	101	3.49	.63	4411.0	-1.438	.150
not attended	101	3.74	.77			

* $p < .05$

The analysis of Mann-Whitney U test results given in Table 24 indicates that the DTPB scores of the EFL teachers did not differ significantly ($p > .05$) depending on their experience in in-service teacher training within the context of DynEd project.

Table 25 implies comparison of attitudes of the EFL teachers depending on how long they have been using the Internet.

Table 25.

Comparison of Attitudes Depending on the Participants' Net Connection Years

Net connection year	n	Mean Rank	df	χ^2	p
0-5 years	48	98.78	1.4	7.31	.12
6-10 years	50	100.83			
11-15 years	64	92.18			
16-20 years	33	109.79			
21+	5	158.90			

*p<.05

The analysis of Kruskal Wallis Test results given in Table 25 indicates that the DTPB scores of the EFL teachers did not differ significantly ($p>.05$) depending on their years of experience in using a device that is connected to the Internet.

Table 26 represents comparison of the EFL teachers' attitudes based on school levels that they teach.

Table 26.

One-Way Analysis of Variance Of School Level That EFL Teachers Serve

School level	df	Sum of Squares	Mean Square	F	p
Between Groups	2	.270	.135	.263	.769
Within Groups	199	102.025	.513		
Total	201	102.295			

An ANOVA statistical test was performed to compare whether or not there were any differences in attitudes of the participants depending the school levels they teach. The analysis of the results given in Table 26 indicates that there was not a statistically significant ($F(2,199) = .263$, $p = .769$) difference between groups as determined by one-way ANOVA.

4.1.5. Research Question 4

Is there a relationship between the frequency of use and the self-efficacy beliefs of the EFL teachers towards Web 2.0 tools?

In order to understand whether there is a relationship between the frequency of use and the self-efficacy beliefs of the EFL teachers towards Web 2.0 tools, the participants were asked to rate their skills in operating Web 2.0 tools through WTISE Instrument. The tables 27 and 28 give information about this relationship in detail.

Table 27.

Mean Scores and Standard Deviations on Self-Efficacy Beliefs of the EFL Teachers Towards Web 2.0 Tools Use

Items/Construct?	Mean	Std. Deviation
Blogs	3.30	1.09
Wikis	3.25	1.08
Podcasts	3.55	1.09
Social Networking Sites	3.77	0.98
Image Photo Sharings	3.70	1.08
Course Management Systems	3.67	1.05

Table 27 illustrates the mean scores of the participants' confidence levels in using Web 2.0 tools, including SNSs ($m = 3.77$, $SD = 1.08$), IPSs ($m = 3.70$, $SD = 0.98$), CMSs ($m = 3.67$, $SD = 1.05$), Podcasts ($m = 3.55$, $SD = 1.09$), Blogs ($m = 3.30$, $SD = 1.09$), and Wikis ($m = 3.25$, $SD = 1.08$).

The average use of these Web 2.0 tools ($m = 3.54$, $SD = 1.06$) indicates that EFL teachers' self-efficacy tended to be "high", which means they were confident enough to use these Web 2.0 tools. In comparing the mean of the use frequency of Web 2.0 tools and EFL teachers' self-efficacy in operating these Web 2.0 tools, the results suggest that the teachers' confidence in using Web 2.0 tools did not agree with the medium use of these tools in their teaching.

The Pearson correlation coefficient results in Table 28 investigate whether *Web 2.0 tools integration self-efficacy predicts the Web 2.0 tools integration*.

Table 28.

The Frequency of Use and the Self-Efficacy Beliefs of the EFL Teachers Towards Web 2.0 Tools

	<i>n</i> =202	Blogs	Wikis	Podcasts	SNSs	IPs	CMSs
<i>Self-efficacy</i>	Blogs	.22*					
	Wikis		.13				
	Podcasts			.33*			
	SNSs				.26*		
	IPs					.30*	
	CMSs						.19*

*. Correlation is significant at the 0.01 level (2-tailed).

As revealed in Table 28, based on the comparison of WTISEI mean scores to WTII scores for each specific Web 2.0 tool, there is only a statistically low degree of positive correlation ($r=.22$; $p=.01$) between self-efficacy levels of the EFL teachers and frequency of using Blogs. The results indicate that the increase in self-efficacy was not correlated with an increase in use of Web 2.0 tools.

4.1.6. Research Question 5

Is there a relationship between the frequency of use and the attitudes of the EFL teachers towards Web 2.0 tools?

Pearson Correlation test was utilised to investigate the relationship between the frequency of use and the attitudes of the EFL teachers towards Web tools. Table 29 underlines the attitudes of the EFL teachers and frequency of use towards Web 2.0 tools.

Table 29.

The Attitudes of the EFL Teachers and Frequency of Use Towards Web 2.0 Tools

Constructs		Frequency of use					
		Blogs	Wikis	Podcasts	SNSs	IPs	CMSs
AU	Correlation Coefficient	.220**	.236**	.118	.316**	.288**	.239**
	Sig. (2-tailed)	.002	.001	.097	.000	.000	.001
	N	201	200	200	201	201	200
INT	Correlation Coefficient	.220**	.138	.200**	.304**	.302**	.315**
	Sig. (2-tailed)	.002	.052	.004	.000	.000	.000
	N	201	200	200	201	201	200
ATT	Correlation Coefficient	.164*	.179*	.181*	.362**	.280**	.193**
	Sig. (2-tailed)	.020	.011	.010	.000	.000	.006
	N	201	200	200	201	201	200
EU	Correlation Coefficient	.073	.140*	.069	.198**	.233**	.266**
	Sig. (2-tailed)	.304	.049	.332	.005	.001	.000
	N	201	200	200	201	201	200
PU	Correlation Coefficient	.109	.045	.158*	.247**	.248**	.201**
	Sig. (2-tailed)	.125	.531	.025	.000	.000	.004
	N	201	200	200	201	201	200
SN	Correlation Coefficient	.255**	.193**	.238**	.351**	.236**	.281**
	Sig. (2-tailed)	.000	.006	.001	.000	.001	.000
	N	201	200	200	201	201	200
PBC	Correlation Coefficient	.208**	.118	.158*	.337**	.183**	.181*
	Sig. (2-tailed)	.003	.095	.025	.000	.009	.010
	N	201	200	200	201	201	200
PI	Correlation Coefficient	.258**	.214**	.248**	.319**	.278**	.266**
	Sig. (2-tailed)	.000	.002	.000	.000	.000	.000
	N	201	200	200	201	201	200
SRI	Correlation Coefficient	.239**	.131	.245**	.311**	.225**	.198**
	Sig. (2-tailed)	.001	.065	.000	.000	.001	.005
	N	201	200	200	201	201	200
SI	Correlation Coefficient	.267**	.194**	.208**	.317**	.239**	.242**
	Sig. (2-tailed)	.000	.006	.003	.000	.001	.001
	N	201	200	200	201	201	200

(Table 29 Continued)

COMP	Correlation Coefficient	.208**	.131	.188**	.331**	.151*	.194**
	Sig. (2-tailed)	.003	.064	.008	.000	.032	.006
	N	201	200	200	201	201	200
FC	Correlation Coefficient	.166*	.142*	.162*	.260**	.199**	.183**
	Sig. (2-tailed)	.019	.045	.022	.000	.005	.010
	N	201	200	200	201	201	200
SE	Correlation Coefficient	.180*	.147*	.148*	.332**	.217**	.231**
	Sig. (2-tailed)	.010	.038	.037	.000	.002	.001
	N	201	200	200	201	201	200

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The analysis results provided in Table 29 reveal a moderately positive relationship between SNSs mean scores and attitudes significance ($p < .001$). The analysis results of the other constructs provide that there is a positive, but low-level relationship at the .01 and the .05 significance level.

4.1.7. Research Question 6

Is there a relationship between self-efficacy levels and attitudes of the EFL teachers towards Web 2.0 tools integration?

The Pearson product moment correlation coefficient was conducted in order to assess the relationship between EFL teachers' self-efficacy level of Web 2.0 tools integration into their instructions and Web 2.0 adoption scores. In correlation tests, correlation forces are interpreted as a small relationship between .10 and .29, moderate between .30 and .49, and high correlation between .50-1.00 (Cohen, 1988). Further, Cohen (1988) interprets that correlation coefficient between .10 and .29 is thought to represent a weak or small association; a correlation coefficient of .30 and .49 is considered a moderate correlation; and a correlation coefficient of .50 and 1.00 or larger is thought to represent a strong or large correlation.

Table 30 indicates Pearson correlation between self-efficacy and attitudes of the EFL teachers towards Web 2.0 tools use.

Table 30.

Pearson Correlation Between Self-Efficacy and Attitudes of the EFL Teachers Towards Web 2.0 Tools

	Blogs	Wikis	Podcasts	SNSs	IPSs	CMSs	WTISE	PU	SN	BI
Wikis	.71**									
Podcasts	.62**	.69**								
Social Networking Sites (SNSs)	.55**	.50**	.58**							
Image/Photo Sharing Sites (IPSs)	.49**	.56**	.59**	.73**						
Course Management Systems (CMSs)	.60**	.56**	.62**	.56**	.62**					
WTISE	.83**	.84**	.83**	.80**	.80**	.80**				
Perceived usefulness PU)	.34**	.37**	.35**	.43**	.43**	.45**	.48**			
Subjective norms (SN)	.35**	.40**	.39**	.29**	.34**	.46**	.45**	.61**		
Behavioural Intention (BI)	.48**	.38**	.42**	.51**	.46**	.49**	.56**	.59**	.57**	
DTPB	.44**	.45**	.45**	.47**	.47**	.54**	.57**	.88**	.87**	.80**

** . Correlation is significant at the 0.01 level.

The results of the correlational analysis examined in Table 30 indicate that there is a positive and significant relationship between the EFL teachers' Web 2.0 tools self-efficacy and attitudes towards the Web 2.0 tool adoption ($r = .57$; $p < .001$). When the relationships with the WTSIE constructs and the DTPB model to measure attitudes towards the Web 2.0 tool adoption are examined, the results reveal that there is a positive and moderate level of relationship ($p < .001$). When the relationship between DTPB constructs and WTSIE constructs are analysed, the results demonstrate positive, high-strength significant relationship with Behavioural Intention, while the other constructs including Subjective Norms and Perceived Usefulness show a positive and medium-significant relationship. Thus, it can be said that there is a relationship between self-efficacy and attitudes of the EFL teachers towards the Web 2.0 tools.

4.2. The Findings of the Qualitative Data

A semi-structure interview was implemented to gather qualitative data; hence, content analysis was utilised in an effort to describe the data set and to reveal the deeper insights of the EFL teachers' self-efficacy beliefs, frequency of use, and attitudes towards Web 2.0 tools. Each participant's responses were examined respectively. Next, the meaningful words, phrases and sentences in the data set were labelled and coded. Then, codes were divided into themes to be analysed.

4.2.1. EFL Teachers' Frequency of Use in Web 2.0 tools

In an attempt to find deeper details as to what extend EFL teachers incorporate Web 2.0 tools into their classroom teaching, open-ended questions were asked in the interview. Table 31 indicates three factors that determine teachers' frequency of use in Web 2.0 tools.

Table 31.

EFL Teachers' Views on Frequency of Using Web 2.0 Tools

Category	Codes		<i>f</i>
Frequency of Use	Lack of time	P1, P2, P4, P6, P7, P9	6
	Lack of infrastructure	P3, P10	2
	Availability	P3, P5, P8	3

Findings of the content analysis in Table 31 indicate three main reasons that affect EFL teachers' frequency of using Web 2.0 tools. Teachers complained that due to having insufficient free time at school prevents them from experimenting new Web 2.0 tools during a regular school day. Some of the views justifying their opinion were as follows:

P1., "...No, not really to be honest. Because I am very busy with workloads."

P2., "...No, because in the school, it is difficult to focus on learning something new when you are working and surrounded by many students."

P4., "...No. We don't have time to be honest. We are already too busy to get ready for the next lessons."

P6., "...I don't have so much time and opportunity to learn a different kind of web 2.0 tool during a regular school day. Because there is only 15 minutes break and 15 minutes break between each lesson is not a good time to learn new Web 2.0 tools."

P7., “...No, I don't have adequate time because time is just fit and sufficient for schedule.”

P9., “...Well, since I am a really busy teacher, I don't think I have enough time for that. I can only make time to get ready for the lessons I have that day.”

Another noteworthy finding in Table 31 suggests that EFL teachers' frequency of using Web 2.0 tools were related to insufficient technology infrastructure although P3. emphasized that he had adequate time to use Web 2.0 tools in his classes. The participants' statements on the insufficient infrastructure were as in the following:

P3., “...I have adequate time, but I don't have enough technological devices. I mean I work in a village and there are not any smartboards or projectors in my school. And students don't have any mobile phone, so I don't really make effort to learn new Web 2.0 tools.”

P10., “...No, I don't. I am working in a high school. There are only two smartboards and there is no computer, indeed. I have to learn it out of school.”

While some participants indicated time-restriction or lack of infrastructure as a determination to use Web 2.0 tools in their lessons, P5. and P8. underlined that since their weekly schedule was not busy, they could spend time to incorporate Web 2.0 tools in their lessons. Their statements were as in the following:

P5., “...Yes, I have. My daily program at school is not busy. There is a computer in the teachers' room. I use it to see which Web 2.0 tools I can use in my lessons.”

P8., “...I have enough time to do that because I only work 20 hours in a week, so every school day I have about a few hours when I can use the computer in the teachers room to search about Web 2.0 tools.”

4.2.2. EFL Teachers' Self-Efficacy Beliefs towards Web 2.0 tools

Whether or not participants' self-efficacy beliefs towards Web 2.0 tools caused any significant differences in the scale for determining EFL teachers' use of Web 2.0 was checked through open-ended questions that ask their degree of comfort. Table 32 underlines factors that determine teachers' self-efficacy beliefs towards Web 2.0 tools.

Table 32.

EFL Teachers' Views on Their Self-Efficacy Beliefs towards Web 2.0 Tools

Category	Codes	<i>f</i>
Self-Efficacy	In-service teacher training	P1, P2, P3, P4, P5, P6, P7, P10 8
	Superior influence	P3, P7, P8 2
	Insufficient infrastructure	P9 1

Table 32 reveals three agents that affect EFL teachers' self-efficacy towards Web 2.0 tools. Majority of the participants stated that provided that they had frequent in-service teacher training for Web 2.0 tools will increase their self-efficacy towards Web 2.0 tools. Some of the views justifying their opinion were as in the following:

P1. "...I think having enough experience in the in-service teacher training programs would make me feel more comfortable using Web 2.0 tools."

P2. "...I believe that taking trainings about the Web 2.0 tools makes me feel more comfortable to use them in the classroom."

P4. "...I think if I attended in-service trainings about using technology or Web 2.0 tools in lessons, I would feel more confident then."

P5. "...If I had an in-service course to learn how to develop my own Web 2.0 tools, that would greatly increase the prolificacy of my lessons."

P6. "...If I had a small and technological class, it would help me a lot to gain more experience and it would help me be confident to use it."

P10. "...If I could take more in-service teacher training about how to use Web 2.0 tools and experience it for a while, then I would feel more confident to use Web 2.0 tools."

Further examination of the participants' views about level of comfort in using the Web 2.0 tools shown in Table 32 demonstrates that superior influence by the MoNE is a factor that affects teachers' level of comfort in using Web 2.0 tools. The opinions on these statements were as in following:

P3. "...Well, I think the syllabus can also be adapted to the Web 2.0 tools by MoNE. And I would definitely need more trainings."

P7. “...I think more trainings can be helpful to get confident in using Web 2.0 tools for my lessons and curriculum would be more suitable for using them.”

P8. “...I am sure that I will be %100 comfortable if any Web 2.0 tools is recommended by our Ministry of National Education. I can't be sure about these tools' credibility and that is why I can't recommend my students to use them.”

A small number of those interviewed suggested that in order to increase her self-efficacy level, technology infrastructure should be improved. Her statement was as in the following:

P9. “..Well, if the opportunities provided, for example, if my school is equipped with devices such as smartboard, computer classes and students with a tablet device, then I would be confident.”

4.2.3. EFL Teachers' Attitudes towards Web 2.0 tools

Open-ended questions were asked during the interview in an attempt to reveal the participants' opinions about their attitudes towards Web 2.0 tools in regards to its role in education as an instructional tool and feelings about using them in their classrooms. Table 33 stipulates factors that determine teachers' attitudes towards Web 2.0 tools.

Table 33.

EFL Teachers' Views on Their Attitudes towards Web 2.0 Tools

Category	Codes		<i>f</i>
Attitudes	Ease of Use	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10	10
	Perceived Usefulness	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10	10

All participants reported that ease of use of use and perceived usefulness were the most significant factors affecting their intentions to use Web 2.0 tools. The participants indicated that social factors exert a positive influence on intentions to use Web 2.0 tools. Some of the statements of such opinions were in the following:

P1. *“...I think Web 2.0 tools play crucial role in 21st century education system, especially, when we are all surrounded with technological devices. In my opinion, Web 2.0 tools are amusing and easy innovations that help me teach English.”*

P2. *“...Web 2.0 tools foster students' learning and make's teachers' job easier to give innovative lessons. In think, they provide massive teaching source for education. They are available at any time, at any place.”*

P4. *“...I believe that technology is a must for the 21st century's education system. They are free and effective to facilitate teaching and learning. In think, they provide valuable teaching source for education.”*

P5. *“...I thin web 2.0 tools offer many benefits. It enables collaboration and corporation anywhere and anytime. I think Web 2.0 tools are good idea and they are helpful sources.”*

P6. *“...They have a lot of important advantages in the view of time and effectiveness. They are more entertaining than books and notebooks for children. Well, I think they are easy, fun and engaging tools you can use anytime and anywhere.”*

P7. *“...It has an important role to get students used to the autonomous learning through technology, which is the future of the education system. I think using Web 2.0 tools motivate me to use technology in my lessons.”*

P8. *“...They are quite important because of the changing circumstances and standards. However, I believe that we should notice that they are only "tools", which means we can do our job with or without them. They should not be the "aim" of education. I am not biased, but I don't make my lesson plans by relying on them.”*

P9. *“...It is really necessary incorporate Web 2.0 tools into today's English classrooms. They are great tools to teach language skills such as reading, listening, writing and speaking. I think they are easy and dynamic tools to use for teaching English.”*

P10. *“...Web 2.0 tools are so important in teaching languages. A learner can study autonomously and collaborate with their classroom friends. They can use it anywhere and anytime. Well, I think Web 2.0 tools provide enriched content. I can easily use tools to teach English skills.”*

CHAPTER V

DISCUSSION

5.0. Introduction

This chapter presents summary of the whole study. It also includes discussion of the main findings in accordance with research questions. In addition, relevant previous studies are discussed and correlations are indicated in the findings of the present study.

5.1. Summary of the Study

The present study aimed to investigate self-efficacy beliefs, frequency of use and attitudes of the EFL teachers towards Web 2.0 tools in Diyarbakır. In addition, the study intended to identify demographic variables influencing EFL teachers' integration of Web 2.0 tools. The research contexts for this study are 183 public schools located in Bağlar, Yenişehir, Kayapınar, and Sur districts, Diyarbakır in Turkey.

A mixed method research design was adopted in this study. The questionnaire was applied to 202 English teachers working in abovementioned public schools, and a semi-structured interview was held with ten volunteer teachers.

Quantitative data from the questionnaire was analysed using statistical analysis via SPSS 24.0. Descriptive statistics were employed to reveal mean and standard deviation scores of the Likert-scale questionnaire items. To describe demographic information of the participants, frequencies in relation to gender, age, year of experience and the grade that they teach were calculated. Qualitative data from the open-ended questions and interview questions were analysed using content analysis.

5.2. Discussion of the Research Questions 1

To what extent do the EFL teachers incorporate Web 2.0 tools into their classroom teaching?

In this study, the EFL teachers, in general, reported a medium frequency of using Web 2.0 tools. They most widely used social networking sites and blogs, followed by wikis, podcasts and image/photo sharing sites. The least frequently used tools were course management systems. While the findings of this study corroborate those of Özel and

Arikan (2015) that reported most widely used by EFL instructors were social network sites, their study indicated the least frequently used tools were podcasts, blogs, and wikis. The results of the present study also lead to similar conclusion where the participant teachers used social networking sites daily and used podcasts at least once a week, but used content management sites less frequently than other Web 2.0 tools (Alhassan, 2017).

Semi-structured interviews were analysed and the results indicated that two factors negatively affected the teachers' frequency of use in Web 2.0 tools: lack of time and lack of technology infrastructure. Teachers perceived that lack of free time at school prevented them from experimenting new Web 2.0 tools during a regular school day. Another noteworthy finding revealed that EFL teachers' frequency of using Web 2.0 tools were related to insufficient technology infrastructure, although P3 had adequate time to use Web 2.0 tools in his classes. While some participants indicated the time-restriction or lack of infrastructure as a determination to use Web 2.0 tools in their lessons, P5. and P8. stated that their weekly schedule was not busy; thus, they could spend time to incorporate Web 2.0 tools in their lessons. It can, therefore, be inferred that having flexible working hours can be a predictor of the teachers' use of Web 2.0 tools in the future.

5.3. Discussion of the Research Questions 2

Is there a significant difference between the self-efficacy beliefs of the EFL teachers and their Web 2.0 tools usage according to the following demographic variables?

The EFL teachers who participated the study were females (n=114) and males (n=88) did not indicate any statistically significant difference. Put another way, the results did not have significant effects on the participants' self-efficacy beliefs in Web 2.0 tools. The findings are directly in line with previous findings that revealed no significant differences between male and female prospective teachers' beliefs in Web 2.0 tools self-efficacy (Akkaya, 2019; Onbasili, 2020; Tweed, 2013).

The results further revealed that EFL teachers at the age of 21 and 24 who used podcasts and social networking sites showed a high significant difference in contrast to the age of 40 and above with a relatively low score. However, the results indicated a significant difference in average score of *Web 2.0 Tools Integration Self-Efficacy* according to the participants' age group. These findings confirmed and supported those

of Bandura (1995) who concluded that age does not correlate with self-efficacy because individuals vary greatly in how efficacious they manage their lives. The previous research also echoed similar findings by reporting that there was not a significant difference between self-efficacy beliefs and age of the participants (Bandura, 1995; Hoy and Tschannen-Moran, 2007; Tweed, 2013).

Regarding the levels of self-efficacy in using Web 2.0 tools on the teaching experience years, the EFL teachers who participated in the study did not have statistically significant difference except for social networking sites. A similar pattern of results was obtained in previous study where findings indicated that years of teaching experience did not play a significant role in the self-efficacy scores of teachers (Tweed, 2013). The EFL teachers' education level also did not play an important role in their self-efficacy beliefs towards Web 2.0 tools. Moreover, the results of this study revealed that teachers' experience in using a device to connect to the Internet did not affect their self-efficacy beliefs. This is consistent with what has been found in previous study looking at relationship between teachers' technology experience level, frequency of use and self-efficacy beliefs (Pan and Franklin, 2011). A similar pattern of results was obtained in another study, where findings indicated that the teacher age, years of teaching experience, teacher gender, and the technology professional development did not play a significant role in the self-efficacy scores of teachers (Tweed, 2013).

Qualitative results of the study on the relationship between self-efficacy and some demographic variables, regarding the extent to which the participant teachers use the tools of the Web 2.0 in English language teaching revealed that there is a significant strong relationship between the teachers' self-efficacy and in-service training, technology infrastructure, and superior influence in using Web 2.0 tools in teaching. The results were broadly in line with Alhassan's (2017) and DoBell's (2013) findings as one of the most significant factors influences teachers' use of Web 2.0 tools in their teaching was their in-service training to use these tools. Similar conclusions reported that the in-service teacher training is one of the most significant agents influencing whether school teachers use and incorporate classroom technology (Niederhauser & Perkmén, 2008; Pan, 2010; Ross and Bruce, 2007; Wang & Newby, 2004).

Another important factor that could lead to an increased use of Web 2.0 tools by the teachers in their teaching is the access to these tools at school. If there is an insufficient access to technological devices and tools, such as classrooms without fast Internet access or smartboards, the teachers will not be able to use Web 2.0 tools in their lessons, even if

they are trained to use them. Several studies (DoBell, 2013; Hamada & Ismail, 2014) suggest that access to technology tools and the availability of good infrastructure are among the most important key factors affecting the overall use of computers in education, and Web 2.0 in particular. Such limitations of Web 2.0 tools were also stated in a study by Ünlüer (2018) that concluded Web 2.0 tools could not be used in learning environments unless the internet and the required hardware is available. Those limitations described in the study conducted by Ünlüer (2018) are aligned with the codes distinguished in this study based on the EFL teachers' statements about the “*insufficient infrastructure*”.

5.4. Discussion of the Research Questions 3

Is there a relationship between the attitudes of the EFL teachers and their Web 2.0 tools usage according to the following demographic variables?

The results confirmed that the EFL teachers have positive attitudes towards using Web 2.0 technologies in learning process. Participants reported that using Web 2.0 tools is a good idea, helps their students learn more about the subject, and improves students' satisfaction with the course. Besides, they indicated that Web 2.0 is useful in their teaching, for that reason, they would incorporate Web 2.0 tools in their lessons to help their students better learn English. These results tie well with previous studies wherein most teachers had positive attitudes towards the use of Web 2.0 tools in general (Golshan and Tafazoli, 2014; Kia Heirati and Ahmadi Alashti, 2015; Özel and Arian, 2015).

Another finding of the current study revealed that attitudes based on the participants' gender towards the use of Web 2.0 tools indicated no significant differences. However, this result contradicts the claims of various studies that gender affected teachers' intention to use Web 2.0 tools in the future (Akkaya, 2019; Batsila, Vavougiou, Tsihouridis, & Ioannidis, 2014; Onbasili, 2020; Tweed, 2013). The result also echoes in the findings of previous surveys which signpost that those who intend to use Web 2.0 tools are mostly men (Batsila, Vavougiou, Tsihouridis, & Ioannidis, 2014).

Another important finding was that the teachers' age did not affect the attitudes of them towards Web 2.0 tools. These results support previous research, which points out that the participants showed no significant difference between years of teaching experience and attitudes towards the use of the Internet in teaching. However, these

findings seem to contradict with another research which found that a teacher's age can be predictor for future use of Web 2.0 tools and that the older the teacher is, the less use of Web 2.0 tools as an instructional tool (Alhassan, 2017).

The results supported that teachers' experience in teaching confirm no significance in their attitudes towards Web 2.0 tools. This outcome is contrary to that of the study, which found that the teaching experience affected teachers' intention to use Web 2.0 tools in the future (Batsila et al., 2014). The EFL teachers' education level did not affect their attitudes towards Web 2.0 tools. This result is also contrary to that of Ashyüksel and Bahtiyar (2017) who found that the education degree of the participant librarians elucidated positive attitudes towards digital platforms. The results of the current study indicated that EFL teachers who participated FATİH Project and Interactive Whiteboard in-service trainings had positive attitudes towards Web 2.0 tools, whereas those who attended EBA and DynED in-service teacher trainings had negative attitudes. These results further support the idea of that integration of both the pre-service and in-service applied technology training significantly helped teachers adopt technological approaches (Basal, 2016; Çam, 2018; Demirkan, 2019; Pan and Franklin, 2011).

The results of the present study indicated that there was no statistically significance between school levels and net connection years of the teacher and their attitudes. This finding is consisted with the results of one study, which documented that the teachers' levels of knowledge and use of ICT, and attitudes towards the Internet and computers revealed the same difference (Tezci, 2010). In other words, the less the years of experience, the higher their knowledge and ICT use.

5.5. Discussion of the Research Questions 4

Is there a relationship between the frequency of use and the self-efficacy beliefs of the EFL teachers towards Web 2.0 tools?

The average use of these Web 2.0 tools indicated that the EFL teachers' self-efficacy tended to be "high", which means they were confident enough to use these Web 2.0 tools. In comparing the mean of the use frequency of Web 2.0 tools and the EFL teachers' self-efficacy in operating these Web 2.0 tools, the results suggest that the teachers' confidence in using Web 2.0 tools did not agree with the medium use of these tools in their teaching. As results revealed, based on the comparison of WTISEI mean

scores to WTII scores for each specific Web 2.0 tool, there is only a statistically low degree of positive correlation between self-efficacy levels of the EFL teachers and frequency of using blogs. In a general sense, the results indicated that the increase in self-efficacy was not correlated with an increase in the use of Web 2.0 tools. Based on the data found, this does not align with research that suggested a teacher's technology self-efficacy as a reliable predictor of behaviour change for new technology integration and Web 2.0 tools implementation (Huitt, 2000; Pajares, 2002; Pan & Franklin, 2011; Ward, 2015).

5.6. Discussion of the Research Questions 5

Is there a relationship between the frequency of use and the attitudes of the EFL teachers towards Web 2.0 tools?

The current study indicated a positive attitude towards the use of social networking sites only, which can be interpreted that teachers who had positive attitudes towards social networking sites used them more often than the other Web 2.0 tools. Although teachers had positive attitudes towards Web 2.0 tools in general, they did not use them as often as social networking sites. These results are in accord with previous studies indicating that though EFL instructors showed a positive attitude towards the use of the Internet and Web 2.0 tools in language teaching, they were not using these tools adequately in their teaching (Özel & Arıkan, 2015).

The qualitative findings revealed the participants' opinions about their attitudes towards Web 2.0 tools in regards to its role in education as an instructional tool and feelings about using them in their classrooms. All participants reported that ease of use and perceived usefulness were the most significant factors affecting their intentions to use Web 2.0 tools. That is to say, the EFL teachers stated that Web 2.0 tools provide amusing, easy, helpful, innovative, effective, valuable, collaborative, cooperative, time-saving, engaging, autonomous, motivating, fostering, and facilitating learning. There are similar attitudes expressed by Onbasili (2020) describing that the participants found Web 2.0 tools easy, convenient and enjoyable to use and that they wanted to use those tools in other courses. The findings of this study also support the evidence from previous observations of Ünlüer (2018) reported that the use of Web 2.0 tools in lessons taught by prospective teachers made the lessons more enjoyable, provided fun learning, attracted

students' attention, and students participated in lessons more. Therefore, it provided retention in learning, autonomy, and easier learning process.

5.7. Discussion of the Research Questions 6

Is there a relationship between self-efficacy levels and attitudes of the EFL teachers towards Web 2.0 tools integration?

The results reported that teachers' self-efficacy is a significant predictor of behavioural intention to use Web 2.0 tools. Likewise, subjective norms and perceived usefulness put forward a positive and medium-significant relationship. Thus, it can be concluded that the EFL teachers' perceived usefulness and subjective norms were strong determinants of their attitudes towards the Web 2.0 tools. These results match those observed in earlier studies where pre-service teachers' positive attitudes of perceived usefulness of Web 2.0 tools were the strongest determinant of their intentions (Khaliq, 2016; Sadaf, Newby and Ertmer, 2016; 2012). The body of literature indicated that the perceived usefulness and ease of use positively affect technology acceptance of teachers (Cakar; 2018; Lee & Coughlin, 2015; Usluel & Mazman, 2010), and their intention to use technology (Jeung, 2014).

Consequently, it can be inferred that the ease of use and perceived usefulness can predict the EFL teachers' intentions to use Web 2.0 tools in their future classrooms.

CHAPTER VI

CONCLUSION

6.0. Introduction

In this chapter, conclusion based on the findings from previous chapter, implications, limitations and suggestions of the study are contextualized in reference to elucidate future researches; therefore, general criticisms and suggestions over the educational practices are addressed in detail.

6.1. Conclusion

Based on the findings of the present study, EFL teachers mostly used social networking sites and blogs, followed by wikis, podcasts and image/photo sharing sites. The least frequently used tools were course management systems. The popularity of social networks, blogs, and image/photo sharing sites in their daily life may have led these tools to be frequently used by EFL teachers. However, it can be inferred that the majority of teachers rarely incorporated course management systems into their lessons since they may not need these tools in their daily lives (Ünal, 2019). Semi-structured interview results indicated that lack of time and lack of technology infrastructure negatively affect teachers' Web 2.0 tools use during a regular school day. From this aspect, teachers should be given more time and up-to-date infrastructure to promote their use of Web 2.0 tools.

EFL teachers' self-efficacy level did not differ according to their demographic variables such as gender, teaching experience, teachers' experience level, in-service training background, experience in using a device to connect to the Internet. Previous research also corroborates the results (Akkaya, 2019; Alhassan, 2017; DoBell, 2013; Niederhauser & Perkmen, 2008; Onbasili, 2020; Pan & Franklin, 2011; Pan, 2010; Ross & Bruce, 2007; Tweed, 2013; Wang & Newby, 2004). However, teachers' age affected their self-efficacy levels towards the use of podcasts and social networking sites. Previous research concluded that age does not correlate with self-efficacy because individuals vary greatly in how efficacious they manage their lives (Bandura, 1995). Results of the current study indicated that teachers between 21 and 24 ages had higher self-efficacy than those who are at the age of 40 and above, which may be due to the fact that the initial is amongst

the generation Z and they are quite intertwined with technology, thus their self-efficacy level is the highest. Teachers also reported that their self-efficacy levels were influenced by insufficient infrastructure and insufficient in-service teacher training, which prevented an effective adoption of Web 2.0 tools. With this regard, MoNE should provide teachers who are 40 and above with more the in-service teacher trainings in an effort to increase teachers' self-efficacy towards Web 2.0 tools.

In a general sense, EFL teachers indicated positive attitudes towards using Web 2.0 technologies in learning process. They reported that using Web 2.0 tools is a good idea, helps their students learn more about the subject, and improves students' satisfaction with the course. These results tie well with previous studies wherein most teachers had positive attitudes towards the use of Web 2.0 tools in general (Golshan and Tafazoli, 2014; Kia Heirati and Ahmadi Alashti, 2015; Özel and Arikan, 2015). In contrast to previous results, teachers' gender, age, teaching experience, school levels, and net connection years did not affect the attitudes of them towards Web 2.0 tools. Although teachers had positive attitudes towards Web 2.0 tools, they reported that the Internet connection problem, intensive curriculum, crowded classrooms, inadequate servers, technical problems and negative attitudes of administrators may cause them to adopt negative attitudes towards Web 2.0 tools.

In comparing the mean of the frequency of use and EFL teachers' self-efficacy in using Web 2.0 tools, the results revealed that the high self-efficacy was not correlated with an increase in the use of Web 2.0 tools. In another word, teachers' confidence towards Web 2.0 tools did not affect their frequency of using the tools. Based on the data found, this does not align with research that suggested a teacher's technology self-efficacy as a reliable predictor of behaviour change for new technology integration and Web 2.0 tools implementation (Huitt, 2000; Pajares, 2002; Pan & Franklin, 2011; Ward, 2015).

During the interviews, EFL teachers stated that Web 2.0 tools provide valuable, collaborative, cooperative, effective learning in addition to amusing, easy, helpful, innovative, timesaving, engaging, autonomous, motivating, fostering and facilitating learning. There are similar attitudes expressed by Onbasili (2020) describing that the participants found Web 2.0 tools easy, convenient and enjoyable to use and that they wanted to use those tools in other courses. However, teachers only had positive attitudes towards the use of social networking sites. Popularity of social networking sites can lead teachers to develop positive attitudes towards the incorporation of Web 2.0 tools into their

lessons if they were given chances like decreasing their burdens such as overloading schedules and integration of technology more than ever not merely in their school settings but also in the other environments they could utilize these tools free.

EFL teachers' perceived usefulness and subjective norms can predict the EFL teachers' intentions to use Web 2.0 tools in their future classrooms. These results match those observed in earlier studies (Cakar; 2018; Jeung, 2014; Khati, 2016; Lee & Coughlin, 2015; Sadaf, Newby and Ertmer, 2016; 2012; Usluel & Mazman, 2010). These findings could provide administrators, program designers and instructors insight into the perception of EFL teachers in the in-service teaching training program preparation towards Web 2.0 use in their future teaching approaches.

6.2. Implications of the Study

The present study investigated self-efficacy beliefs, frequency of use and attitudes of the EFL teachers towards Web 2.0 tools. This study also sought to examine the demographic variables influencing the integration of Web 2.0 tools. Based on the findings of the research, there were some implications that could be inferred from the analysis of the findings in the study.

Web 2.0 tools have emerged as the new facet of the internet, receiving the attention they deserve in many countries, and now called pedagogy 2.0 (McLoughlin & Lee, 2008). Web 2.0 tools are incorporated into the new teaching techniques and theories. It is obvious that these theories, which are mostly supported by social constructivist learning theory, are of great importance and value within the Turkish Education System.

With FATİH project, educators have attempted to increase the use of technology in the classroom and schools in our country. It is significant for both EFL teachers and students to obtain the ability of digital literacy to achieve the purpose of this project and to use the information technologies in every language classroom. Among these technologies, Web 2.0 tools take a particularly noteworthy place. At this point, especially EFL teachers need to be supported technologically and they need to use various interactive and innovative technologies in order to create and deliver enriched teaching materials, contents, and different tools. Through the teacher trainings, EFL teachers should be supported and trained to use these Web 2.0 tools to a certain extent.

Upon the consideration that technology plays an important role in language learning currently, this study is likely to offer significant implications for several parties.

First of all, the findings of this study may contribute to invaluable information to policy-makers, stakeholders, teacher educators and professionals responsible for designing and implementing a meaningful teacher training programs across Turkey.

Another essential implication of the study is that the globalization demands for more effective and competent EFL teachers in Web 2.0 tools usage, especially for English language learning, the most commonly spoken language in the world. As pandemic spread all over the world, utilizing technological tools becomes imperative for any individual in or out of education so that removed education could be applied without guidance to be gathered on time. Moreover, administrators may be guided on what should be emphasized for the EFL teachers training to improve their performance in Web 2.0 tool usage.

For the researchers, the study may help them uncover precious findings that many researchers may not have been able to explore via technological and instructional tools.

6.3. Limitations and Suggestions

The findings of this research need to be interpreted in the context of its potential limitations. The present study was conducted with adult EFL teachers working in public schools, Diyarbakır, south-eastern part in Turkey. Thus, the results of this study may encompasses some differences in other state and private schools in cities located in different parts of Turkey. In addition, in terms of data collection, the semi-structured interviews were only conducted with 10 EFL teachers who have a Bachelor of Arts (BA) or a Master of Arts (MA) in ELT. A larger number of participants would increase the reliability of the research findings.

The present research investigated teachers' perspectives of Web 2.0 tools. Further research needs to be conducted focussing on the students' perspectives on how effective they think technology is as a tool to support their learning in order to correlate research findings. In the present study, questionnaire and semi-structured interview were used as research instruments. Future research can also employ different research instruments such as observations or diaries taken by both teachers as the real actors of teaching foreign languages and students as the social actors of learning in foreign language. This could give a deeper insight into the teachers' and students actual use of technology in their academic and social lives.

The present study, by focussing on public schools, brought to light teachers' perspectives on using Web 2.0 tools in their English classes. Future research also needs to investigate teachers' needs and concerns about the effective use of different techno-pedagogical digital tools, because the twenty first century requires both teachers and learners become aware of innovations and social innovations that promote learning process to meet the new changes in coming era.

This study also highlights the significance of incorporating Web 2.0 tools into education during the virulent COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing global pandemic of coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (WHO, 2020). The pandemic has caused global social and economic disruption (Chakraborty & Maity, 2020). Schools, universities, and colleges have been closed either on a nationwide or local basis in 172 countries, affecting approximately 98.5 percent of the world's student population (UNESCO, 2020). Hence, the significance of communicating and having the right of education nationwide becomes much more important in utilizing techno-pedagogical tools.

The pandemic has also affected Turkish education system, as it has affected all other education systems in the world. With the spread of the virus across our country, the Ministry of National Education and referring to *Council of Higher Education* (Yükseköğretim Kurulu) decided to close schools and universities on March 16, 2020. With the considerable time of schools to be closed, the Ministry of National Education, universities, administrators and teachers continued their education at home. First, universities commenced distance learning through course management systems; they announced that they would hold meetings, seminars and conferences through the video conference system.

According to Strategic Plan of the MoNE (2019 and 2023)'s Lifelong Learning and Private Education Institutions framework (Ministry of Education, 2019), the introduction of distance education accelerated with the closure of schools. The MoNE introduced digital classrooms, online e-learning platforms through live lessons on EBA.gov.tr and TRT EBA, launched March 2020, a remote education channel due to the COVID-19 pandemic. The channel is split into 3 groups: primary school, middle school, and high school. Live lessons, subject revisions, and various activities have been broadcasted on those platforms. In many instances, teachers have made efforts to deliver video lessons they have taken at home with their own resources. Besides, they have

created various activities for their students and parents. Some of the teachers tried to reach students with different programs, applications and Web 2.0 tools such as through Zoom, WhatsApp, Skype, YouTube, Facebook, Quizlet, Kahoot, and Microsoft Teams.

Thanks to the advent and ubiquitous presence of distance education through programs, applications and Web 2.0 tools, teachers can enable students and parents to blend more with technology and benefit from technology even during the pandemic. In this way, teachers, administrators and all school stakeholders will understand the importance of digital literacy. Teachers, who develop high self-efficacy and positive attitude towards technology, by not neglecting to use such practices, can take the opportunity and take initiatives that are more active and develop new methods and techniques accordingly. However, teachers who develop low self-efficacy and negative attitudes towards technology integration can keep themselves in the background and avoid using them. This situation may mutually arise negative effects on teachers and students not affecting them individually but all the nation and generations in the future since teachers play a vital role to transfer their noteworthy knowledge to net generations as long as they feel equipped within techno-pedagogy.

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APPENDICES

Appendix 1. Questionnaire

The Study of Self-Efficacy Beliefs and Attitudes of In-Service EFL Teachers towards the Usage of Web 2.0

Dear Teachers,

The aim of this present study is to reveal the relationship of the self-efficacy beliefs and attitudes of in-service EFL teachers towards the Web 2.0 tool usage. The questionnaire consists of four parts. Please indicate to what degree you agree with all the following statements by crossing (X) the each statement. You do not have to write your name as there will be no personal evaluation. All responses to this survey will be kept confidential and will only be used for this research. In order to ensure the validity of your survey, please fill in all statements.

I would like to express my special thanks for your participation and cooperation.

Eyyüp YAPRAK

Çukurova University, Adana, Turkey

Master of Arts in English Language Teaching

E-mail: eyyupyaprak@msn.com

Part 1

	Demographic Information
	Instructions: In this section, gender, age, teaching experience, university degree and inservice training background information are questioned. After checking the required places, please go to the Part 2.
1	Gender : () Male () Female
2	Age : () 21-24 () 25-29 () 30-34 () 35-39 () 40-44 () 45-49 () 50-54 () 55+
3	Teaching experience: () 0-5 years () 6-10 years () 11-15 years () 16-20 years () 21+
4	University degree : () Bachelor's degree () Master's degree () Doctorate degree
5	In-service training (INSET) background : () Fatih Project () EBA Please tick all INSETs you have attended. () Interactive Whiteboard () DynEd
6	How long have you been using a device that can connect to the internet? : () 0-5 years () 6-10 years () 11-15 years () 16-20 years () 21+
7	The level of education you serve now : () Primary school () Secondary school () High school
8	The district where you serve now : () Bağlar () Kayapınar () Sur () Yenişehir

Part 2

Pan and Franklin's (2011) Web 2.0 Tools Integration Instrument (W2TII)

Instructions: In order to determine how often you use the following Web 2.0 tools with your students, cross (X) each category and, if any, indicate what kinds of Web 2.0 tools you use.

*“Daily (5)”, “At least once per week (4)”, “At least once per month (3)”,
“At least once per year (2)”, and “Never (1)”*

		Daily	At least once per week	At least once per month	At least once per year	Never
1	Blogs	(5)	(4)	(3)	(2)	(1)
	List Blogs you use for teaching:					
2	Wikis	(5)	(4)	(3)	(2)	(1)
	List Wikis you use for teaching:					
3	Podcasts	(5)	(4)	(3)	(2)	(1)
	List Podcasts you use for teaching:					
4	Social Networking Sites (e.g. Facebook, Twitter, Instagram ...etc.)	(5)	(4)	(3)	(2)	(1)
	List Social Networking Sites you use for teaching:					
5	Image/Photo Sharing Sites (e.g. Flickr, Google Photos, Picasa, ...etc.)	(5)	(4)	(3)	(2)	(1)
	List Image/Photo Sharing Sites you use for teaching:					
6	Course Management Systems (e.g. Moodle, Canvas, Edmodo, Docebo, Classmojo, EBA, DynED...etc.)	(5)	(4)	(3)	(2)	(1)
	List Course Management Systems you use for teaching:					

Adapted from Pan, S. C., & Franklin, T. (2011). In-service teachers' self-efficacy, professional development, and Web 2.0 tools for integration. *New Horizons in Education*, 59(3), 28–40.

Part 3

Pan and Franklin's (2011) Web 2.0 Tools Integration Self-Efficacy Instrument (WTISEI)

Instructions: The following statements consist of 27 items about EFL teachers' self-efficacy beliefs towards the Web 2.0 usage. Please read these items carefully and indicate your level of agreement with each statement below by crossing (X) the appropriate brackets.

*“Strongly Agree (5)”, “Agree (4)”, “Neutral (3)”, “Disagree (2)”, and
“Strongly Disagree (1)”*

When using Web 2.0 tools in teaching, I feel confident that I can...

			Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Blog	create my own blog (to be accessed by my students as part of a lesson)	(5)	(4)	(3)	(2)	(1)
2		post news or comments on a blog	(5)	(4)	(3)	(2)	(1)
3		edit or delete information on a blog	(5)	(4)	(3)	(2)	(1)
4		add links on a blog	(5)	(4)	(3)	(2)	(1)
5		upload attached files on a blog	(5)	(4)	(3)	(2)	(1)
6	Wikis	add information on a wiki	(5)	(4)	(3)	(2)	(1)
7		edit information on a wiki	(5)	(4)	(3)	(2)	(1)
8		delete information on a wiki	(5)	(4)	(3)	(2)	(1)
9		revise the information version for what I want on a wiki (use the history record tool to verify the version I want)	(5)	(4)	(3)	(2)	(1)
10		upload files to a wiki, such as pictures, PowerPoint, word documents, pdf files, etc.	(5)	(4)	(3)	(2)	(1)
11	Podcasts	use computers for create a podcast, such as an mp3 file	(5)	(4)	(3)	(2)	(1)
12		upload podcast files online	(5)	(4)	(3)	(2)	(1)
13		download podcast files online	(5)	(4)	(3)	(2)	(1)
14		use RSS feed to subscribe to podcast files	(5)	(4)	(3)	(2)	(1)

continued...

When using Web 2.0 tools in teaching, I feel confident that I can...

			Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
15	Social Networking Sites	create my own social network site	(5)	(4)	(3)	(2)	(1)
16		post information on social network sites	(5)	(4)	(3)	(2)	(1)
17		maintain contact with my friends through social network sites	(5)	(4)	(3)	(2)	(1)
18		invite friends to join my social network site	(5)	(4)	(3)	(2)	(1)
19		set up profile security levels of my social network site	(5)	(4)	(3)	(2)	(1)
20	Image/Photo Sharing Sites	create an image/photo sharing site account	(5)	(4)	(3)	(2)	(1)
21		use image/photo sharing sites to upload images/photos online	(5)	(4)	(3)	(2)	(1)
22		use image/photo sharing sites to edit images/photos (such as add text, resize images, or add tags)	(5)	(4)	(3)	(2)	(1)
23		use image/photo sharing sites to create a slideshow or video presentation	(5)	(4)	(3)	(2)	(1)
24	Course Management Systems	use a course management system to manage classroom materials, such as post a syllabus and curriculum documents	(5)	(4)	(3)	(2)	(1)
25		arrange a layout of my course management system site, such as display course material as weekly topics or social issues	(5)	(4)	(3)	(2)	(1)
26		use a course management system embedded tools to communicate and interact with my students, such as a blog, wiki, announcement, or chat room	(5)	(4)	(3)	(2)	(1)
27		use a course management system to create quizzes for my students online	(5)	(4)	(3)	(2)	(1)

Adapted from Pan, S. C., & Franklin, T. (2011). In-service teachers' self-efficacy, professional development, and Web 2.0 tools for integration. *New Horizons in Education*, 59(3), 28–40.

Hartshorne and Ajjan (2009)'s the Decomposed Theory of Planned Behavior (DTPB) Model to Measure Attitudes

“Strongly Agree (5)”, “Agree (4)”, “Neutral (3)”, “Disagree (2)”, and “Strongly Disagree (1)”

[illegible]

SRI1	My superior, who influences my behavior would think that I should use Web 2.0 technologies in the classroom	(5)	(4)	(3)	(2)	(1)
SRI2	My superior whom I report to would think that I should use Web 2.0 technologies in the classroom	(5)	(4)	(3)	(2)	(1)
<i>Student influence</i>						
SI1	Students who influence my behavior think that I should use Web 2.0 technologies in the classroom	(5)	(4)	(3)	(2)	(1)
SI2	Students who are important to me think that I should use Web 2.0 technologies in the classroom	(5)	(4)	(3)	(2)	(1)
<i>Compatibility</i>						
Comp1	Using Web 2.0 technologies are compatible with the way I teach	(5)	(4)	(3)	(2)	(1)
Comp2	Using Web 2.0 technologies fit well with the way I teach	(5)	(4)	(3)	(2)	(1)
<i>Facilitating conditions—technology</i>						
FC1	The Web 2.0 technologies are compatible with the computer I already use in the classroom	(5)	(4)	(3)	(2)	(1)
<i>Facilitating conditions—resources</i>						
FC2	I can use Web 2.0 technologies using any computer connected to the Internet	(5)	(4)	(3)	(2)	(1)
<i>Self-efficacy</i>						
SE1	I would feel comfortable using Web 2.0 technologies	(5)	(4)	(3)	(2)	(1)
SE2	I could easily use Web 2.0 technologies on my own	(5)	(4)	(3)	(2)	(1)
SE3	I know enough to use Web 2.0 technologies	(5)	(4)	(3)	(2)	(1)

Adapted from Ajjan, H., & Hartshorne, R. (2009). Investigating faculty decisions to adopt Web 2.0 technologies: Theory and empirical tests. *The Internet and Higher Education*, 11(2), 71-80.

Appendix 2. Semi-Structured Interview Questions

Interview Questions

Set 1: Participant Background Interview Questions:

1. What is your gender?
2. How old are you?
3. How long have you been teaching English?
4. What is the highest degree you hold?
5. Have you ever had trainings for technology adaptation to the classroom? (For example, Interactive Whiteboard, FATIH Project, EBA, DynEd etc.)
6. What educational stage(s) do you teach?
7. What type(s) of technology do you have access to at home and work? (For example, mobile phone, Interactive Whiteboard, tablet, laptop, computer, Smart TV, etc.)

Set 2: Participant Focused Interview Questions:

Frequency

1. How often do you use Web 2.0 tools during the regular workday for instructional purposes?
2. How often do you experiment or take the time to learn a new Web 2.0 tools? In what ways?
3. Do you feel you have **adequate time** during the regular school day to learn about Web 2.0 tools to use in your classroom? Why or why not?

Self-Efficacy

1. Do you consider yourself a risk-taker? Why or why not?
2. Do you consider yourself an innovative teacher? Why or why not?
3. What do you believe would help you feel more comfortable in using Web 2.0 tools?
4. Would you say that when you are integrating Web 2.0 tools into a lesson, you are in control of the lesson or your students are? Why or why not?
5. How successful do you feel about using Web 2.0 tools in your classroom? Are you doing a good job with the Web 2.0 tools or could it be better?

Attitudes

1. How would you describe Web 2.0 tools' role in education?
2. How do you feel about using Web 2.0 tools in your classroom? Why?
3. How would you describe your attitude toward Web 2.0 tools in regards to its role in education as an instructional tool?
4. What, if anything, challenges you/scares you about using Web 2.0 tools in the classroom?
 - a. How and why do the things mentioned in #5 challenge you/scare you?

Decision to Adopt

1. Are there some types of Web 2.0 tools that you use more often than others? Why or why not?
2. What affects your decision on whether or not to integrate Web 2.0 tools into a particular lesson?
3. Do you feel Web 2.0 tools engage students more so than other methods of instruction? If yes, why or how?
4. What do you believe would help make you more comfortable in using Web 2.0 tools in your classroom instruction?

What more can you tell me about your experiences with Web 2.0 tools in relation to your teaching practice?

Adapted from Farah, A. C. (2012). Factors influencing teachers' technology self-efficacy: A case study. *ProQuest Dissertations and Theses*, (February), 212.

Appendix 3. Research Permission to Collect Data



T.C
BAĞLAR KAYMAKAMLIĞI
İlçe Milli Eğitim Müdürlüğü

Sayı : 73758977-604,02-E.6289351
Konu : Araştırma İzni (Eyüp YAPRAK)

27.03.2019

..... MÜDÜRLÜĞÜNE

Çukurova Üniversitesi Sosyal Bilimler Enstitüsü İngiliz Dili Eğitimi Anabilim Dalı Yüksek Lisans Öğrencisi Eyüp YAPRAK'ın "**Hizmet İçi Eğitimi Katılımcıları İngilizce Öğretmenlerinin Web 2.0 Araçlarının İngilizce Öğretimine Entegrasyonuna Yönelik Öz Yeterlilik Algısı İnancı ile Tutumları Arasındaki İlişki**" konulu tez çalışması için İlçemize bağlı İlkokul, Ortaokul, ve Liselere yönelik çalışma yapmak isteği ekli onay ile uygun görülmüştür.

Söz konusu araştırma çalışmasının Okul Müdürlerinin gözetiminde ve sorumluluğunda gönüllülük esasına bağlı olarak, 2018-2019 eğitim öğretim yılı içerisinde eğitim öğretimi aksatmayacak şekilde yapılması hususunda;

Gereğini rica ederim.

İzettin ZENGİN
Müdür a.
İlçe Milli Eğitim Şube Müdürü

EK:

1- Yazı ve Ekleri

Adres: Strateji Geliştirme Şubesi
Elektronik Ağ:
e-posta:

Bilgi için: Abdulaziz YAVUZ
Tel: 0 (412) 322 23 24
Faks: 0 () _ _ _

Bu evrak güvenli elektronik imza ile imzalanmıştır. <https://evraksorgu.meb.gov.tr> adresinden 04c0-15b5-340d-afb8-8af9 kodu ile teyit edilebilir.

Appendix 4. Permission to use the data tools.



Eyyup YAPRAK <eyyupyaprak@gmail.com>

Permission to use data tool.

2 ileti

Eyyup YAPRAK <eyyupyaprak@gmail.com>

17 Temmuz 2018 12:45

Alıcı: richard.hartshorne@ucf.edu, Eyyüp Yaprak <eyyupyaprak@gmail.com>

Dear Professor Hartshorne:

I am a master's student from Çukurova University, Turkey writing my dissertation titled The Study of In-Service EFL Teachers' Self-Efficacy Beliefs and Attitudes towards the Usage of Web 2.0. I would kindly like your permission to use the Decomposed Theory Of Planned Behavior (DTPB) Model To Measure Attitudes instrument in my research study. I would like to use and print your survey under the following conditions:

- I will use the surveys only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail:

eyyupyaprak@gmail.com

I am looking forward to hearing from you.

Best Regards,

Eyyüp YAPRAK

B.A. in English Language Teaching

M.A. Student in English Language Teaching

Skype : eyyupyaprak

E-mail : eyyupyaprak@gmail.com

Richard Hartshorne <Richard.Hartshorne@ucf.edu>

17 Temmuz 2018 12:53

Alıcı: Eyyup YAPRAK <eyyupyaprak@gmail.com>

This is acceptable. Good luck with your scholarship.

Sent from my iPhone.

[Alıntılanan metin gizlendi]



Eyyup YAPRAK <eyyupyaprak@gmail.com>

Permission to use data tool.

5 ileti

Eyyup YAPRAK <eyyupyaprak@gmail.com>

17 Temmuz 2018 12:48

Alici: franklit@ohio.edu, franklinteresa@gmail.com, Eyyüp Yaprak <eyyupyaprak@gmail.com>

Dear Dr. Franklin:

I am a master's student from Çukurova University, Turkey writing my dissertation titled The Study of In-Service EFL Teachers' Self-Efficacy Beliefs and Attitudes towards the Usage of Web 2.0. I would kindly like your permission to use the Web 2.0 Tools Integration Instrument (W2TII) and Web 2.0 Tools Integration Self-Efficacy Instrument (WTISEI) in my research study. I would like to use and print your survey under the following conditions:

- I will use the surveys only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail:

eyyupyaprak@gmail.com

I am looking forward to hearing from you.

Best Regards,

Eyyüp YAPRAK

B.A. in English Language Teaching

M.A. Student in English Language Teaching

Skype : eyyupyaprak

E-mail : eyyupyaprak@gmail.com

Teresa Franklin <franklit@ohio.edu>

17 Temmuz 2018 18:49

Yanıtlama Adresi: franklit@ohio.edu

Alici: Eyyup YAPRAK <eyyupyaprak@gmail.com>

Hello Eyyup Yaprak,

I give my permission to use the surveys identified and with the noted conditions in your email. I wish you much success in completing your research!

Best wishes,

Dr. Teresa Franklin

"A teacher affects eternity; [she]he can never tell where the influence stops." - Henry Adams

Dr. Teresa Franklin

Professor Emerita, Educational Studies-Instructional Technology

CAEP 2015-2019

Fulbright Research Scholar to Turkey 2013-14

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[Alıntılanan metin gizlendi]

CURRICULUM VITAE

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Derece	Alan	Üniversite	Yıl
Yüksek Lisans	İngiliz Dili Eğitimi	Çukurova Üniversitesi	2020
Lisans	İngilizce Öğretmenliği	Dicle Üniversitesi	2016
Önlisans	Bilgisayar Teknolojisi ve Programlama	Dicle Üniversitesi	2009

Yüksek Lisans Tez Başlığı: An Investigation into EFL Teachers' Self-Efficacy Beliefs, Frequency of Use and Attitudes Towards Web 2.0 Tools

Danışman: Doç.Dr. GÜLDEN TÜM

Görevler:

2016 – 2020 İngilizce Öğretmeni, Karahan Ortaokulu, Diyarbakır.

2018 – Proje Asistanı, Social Justice, Now!: A study on raising pre-service English language teachers' awareness on social justice.

ESERLER

A. Uluslararası hakemli dergilerde yayımlanan makaleler :

B. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (Proceedings) basılan bildiriler :

-