EFL TEACHERS' PERCEPTIONS OF BICHRONOUS ONLINE TEACHING

DENİZ UZUN

A THESIS SUBMITTED

FOR

THE DEGREE OF MASTER OF ARTS

IN

TEACHING ENGLISH AS A FOREIGN LANGUAGE

İHSAN DOĞRAMACI BILKENT UNIVERSITY

ANKARA

MARCH 2022

I dedicate this thesis to my beloved family…

EFL Teachers' Perceptions on Bichronous Online Teaching

The Graduate School of Education

of

İhsan Doğramacı Bilkent University

by

Deniz Uzun

In Partial Fulfilment of the Requirements for the Degree of

Master of Arts

in

Teaching English as a Foreign Language

The Department of English Language Teaching
Ankara

March 2022

İHSAN DOĞRAMACI BILKENT UNIVERSITY

GRADUATE SCHOOL OF EDUCATION

Thesis Title: EFL Teachers' Perceptions on Bichronous Online Teaching

Deniz Uzun

February 2022

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

Asst. Prof. Dr. Tijen Akşit (Advisor)

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

Assoc. Prof. Dr. Perihan Savaş, Middle East Technical University (Examining Committee Member)

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

Asst. Prof. Dr. Bahar Gün, İzmir University of Economics (Examining Committee Member)

Approval of the Graduate School of Education

Prof. Dr. Orhan Arıkan (Director)

ABSTRACT

ENGLISH AS A FOREIGN LANGUAGE (EFL) TEACHERS' PERCEPTIONS OF
BICHRONOUS ONLINE TEACHING

Deniz Uzun

M.A. in Teaching English as a Foreign Language

Advisor: Asst. Prof. Dr. Tijen Akşit

February 2022

The aim of this study was to explore English as a Foreign Language (EFL) instructors' perceptions about bichronous online teaching and to examine if the perceptions change according to their age, academic qualification, professional qualification, years of experience in the profession, and perceived competence in the use of educational technologies. This quantitative descriptive study was conducted with 141 English preparatory school instructors of a public university in Ankara, Turkey. The items related to teachers' perceptions of bichronous online teaching were adapted from Venkatesh et al. (2003) for the online questionnaire. Descriptive and inferential statistics were used for data analysis. The results showed that age, academic qualifications, professional qualifications, years of experience in the profession, and perceived competence in the use of educational technologies seemed to have affected the perceptions of some groups of EFL instructors on bichronous teaching, even though most of them were in favor of bichronous online teaching with the constructs in the "Unified Theory of Acceptance and Use of Technology (UTAUT) model" (Venkatesh et al., 2003). The findings also indicated that there is a need for encouraging the instructors to get further training and qualifications, and having a support system and an online community. The instructors should also be motivated so as not to feel intimidated and forced. Furthermore, there should also be rationale justification and clarification as to why and how to use bichronous online teaching.

Keywords: Bichronous online teaching, blended online education, synchronous and asynchronous teaching, teaching EFL

ÖZET

İNGİLİZCEYİ YABANCI DİL OLARAK ÖĞRETEN ÖĞRETMENLERİN ÇEVRİMİÇİ HİBRİT EĞİTİM ALGILARI

Deniz Uzun

Yabancı Dil Olarak İngilizce Öğretimi Yüksek Lisans Programı
Tez Danışmanı: Dr. Öğr. Üyesi Tijen Akşit

February 2022

Bu araştırma İngilizceyi yabancı dil olarak öğreten öğretmenlerin çevrimiçi hibrit eğitimle ilgili algılarını ve algılarında yaşlarına, akademik niteliklerine, profesyonel niteliklerine, mesleki deneyimlerine ve algıladıkları yeterlilik düzeylerine göre farklılıklar bulunup bulunmadığını araştırmayı hedeflemektedir. Bu nicel betimsel çalışma Ankara, Türkiye'de bulunan bir devlet üniversitesinin İngilizce Hazırlık okulunda çalışan 141 öğretim üyesinin katılımı ile geçekleşmiştir. Kullanılan anketin çevrimiçi hibrit eğitimle ilgili algılarla ilgili maddeleri Venkatesh,ve diğerlerin (2003)'den uyarlanmıştır. Veri analizinde betimsel ve çıkarımsal istatistik kullanılmıştır. Sonuçlar, öğretmenlerin çoğunun çevrimiçi hibrit eğitim hakkındaki algılarının Teknoloji Kullanım ve Kabul Birleştirilmiş Modeli (TKKBM) çerçevesinde olumlu olduğunu, fakat yaşlarının, akademik ve profesyonel niteliklerinin, mesleki deneyimlerinin ve algıladıkları teknolojik yeterlik düzeylerinin çevrimiçi hibrit eğitimle ilgili algılarını etkilediğini göstermiştir. Sonuçlar, İngilizceyi yabancı dil olarak öğreten öğretmenlerin daha fazla eğitim ve niteliklere sahip olmak için teşvik edilmesi ve bir destek sistemi ve çevrimiçi bir topluluk kurularak desteklenmesi gerektiğini göstermiştir. Bu öğretmenlerin gözlerinin korkmaması ve zorlanmamaları için motive edilmeleri de gerekmektedir. Çevrimiçi hibrit eğitimin neden ve nasıl kullanıldığının açıklanması ve netleştirilmesi de gereklidir.

Anahtar kelimeler: Çevrimiçi hibrit eğitim, Harmanlanmış çevrimiçi eğitim, Senkron ve asenkron eğitim, İngilizcenin yabancı dil olarak öğretimi.

ACKNOWLEDGEMENTS

I would like thank everyone who has encouraged me during the MA TEFL program.

I would like to start with my supervisor, Asst. Prof. Dr. Tijen Akşit, for her invaluable patience, guidance, and feedback. Without her help it would have been impossible to complete it. I would also like to thank the members of the committee, Assoc. Prof. Dr. Perihan Savaş and Asst. Prof. Dr. Bahar Gün, for their invaluable contributions and their appreciation of my enthusiasm and hard work.

Prof. Dr. Bilal Kırkıcı, Director of the School of Foreign Languages, and Dr. Ece Selva Küçükoğlu, Head of the Department of Basic English at Middle East Technical University deserve a big thank you for granting me the chance to attend the MA TEFL Program.

My dearest friend, Assoc. Prof. Dr. Başak Ağın, deserves my eternal gratitude as she has been there for me all along this journey giving me all the support and encouragement I needed, and she has been my rock and cheerleader when I was in need of her the most. I am very fortunate to have you by my side no matter what. I would also like to express my sincere thanks to my dear friend, Dr. Sezen Korkmaz, for supporting me all the way long with her caring and nurturing side.

My deepest gratefulness is to my parents and my sister. Without their endless patience and love, I would not have been able to complete this program. I would like to thank them for their never-failing encouragement and sympathy in everything I do. They are my all-time supporters, cheerleaders and rocks. I am so grateful and lucky to have them in my life. I dedicate this thesis to them with all my love.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

BOT: Bichronous Online Teaching

UTAUT: Unified Theory of Acceptance and Use of Technology

P: Performance

E: Effort

ATUBOT: Attitude toward Using Bichronous Online Teaching

SI: Social Influence

FC: Facilitating Conditions

SE: Self-efficacy

A: Anxiety

BITUBOT: Behavioral Intention to Use Bichronous Online Teaching

CHAPTER 1: INTRODUCTION

Introduction

Over the course of time, online tool usage has been introduced to supplement face-to-face instruction method, especially at higher education institutions. "The emergence of a technologically-driven society in the 21st century has led to the emergence and growth of online education and distance learning programs" (Braun, 2008, p. 65). The global COVID-19 pandemic has required each institution to adopt online learning and teaching programs so that they can meet the requirements of the institution, their instructors and learners. A great amount of the courses that fall under the category of distance or online education relied on asynchronous or synchronous communication modes (Hrastinski, 2008; Kessler, 2021; Otto, 2017). There were also some institutions using a method that combined both of these online education modes. The adoption of these modes aided the learning and teaching process as these online tools make it possible to have a classroom without having any issues with time and place.

Perspectives of the stakeholders in education have also changed with all these developments. Institutions have a chance to reach students from all around the globe and have part-time instructors from different parts of it to give lectures to their learners with the use of online education as this mode is associated with flexibility to teach and learn from any place at any moment (Hodges et al., 2020). As a result, learners can take part in a more 'self-directed learning' (Lionarakis, 1998) – as they are the ones to control their own learning, also supported with a cooperative environment as a result of having interpersonal communication (Anastasiades, 2008).

This means receiving effective education in a more comfortable setting. Teachers are presented with the possibility of supporting students' learning process with the utilization of various web-based tools as these tools provide interactive learning experiences (Stephens & Mottet, 2008). As teachers are the main stakeholders who are in charge of the whole course of education because they generally develop, implement and revise the programs in case of need, the main attention should be given to their perceptions considering the fact that what they implement impacts the progression of learning to a great extent (Goodyear & Dimitriadis, 2013).

That the classrooms are becoming computer-generated with the use of many technological developments aided the learning, interplay and eagerness of students as well as allowing the educators to form cross-disciplinary partnerships is very important for language teaching as technology helps the teachers' instructions as well as the students' learning (Almrashdeh et al., 2011; Ray & Zenetis, 2009). Interaction is pointed out to be highly effective in language learning of adults (Schmidt, 1983), which is enabled by the use of videoconferencing tools for synchronous education.

Some studies have been conducted on the student perceptions of using synchronous instruction, asynchronous instruction or a combination of both in many contexts including the language teaching context. However, not much is known about teacher perceptions on the utilization of a blended mode of online education which combines the synchronous and asynchronous forms in EFL context; more information is needed on teachers' perceptions on the application of blended online teaching methods in EFL context since they are the implementers in classes and that online education is becoming a more wide-spread learning approach (Lederman, 2019; Norton et al., 2018).

Background of the Study

The practice of teaching can be conducted in various environments from classroom based to online or hybrid instruction (Nilson & Goodson, 2018). While face-to-face education is considered to be the most commonly practiced educational method, various other models have emerged in time taking into consideration the learner or institutional needs. Several institutions throughout the world make use of web-based technologies in their educational processes as online learning is high in demand (Lederman, 2019; Norton et al., 2018).

Keeping in mind the developments in technology and the COVID-19 pandemic, most institutions throughout the world have adopted adopt new forms of teaching approaches so that they could cater for the requirements of their context. The two most common modes of online courses are asynchronous and synchronous (Allen & Seamen, 2014).

Asynchronous courses, where learning occurs outside of real-time interaction (Ally, 2007), offer flexibility to the students for them to complete tasks or internalize the lesson related material in their own time with no meetings which are conducted either in real time or face-to-face. E-mails, video or audio recording could be some of the materials used for these types of courses (Holden & Westfall, 2010; Hrastinski, 2008). One disadvantage of such courses reported by students is that they feel isolated and lonely (Dixon, 2007), potentially making them a less attractive option for the teaching and learning process.

Synchronous courses, where there are real time online meetings with all learners and the instructor (Shi & Morrow, 2006), contribute to the achievement of distance learning (LeShea, 2013). When web-based videoconferencing tools are used, learners have the chance to interact with their classmates and instructors, and

this deals with not only the problem of isolation that is experienced in the case of asynchronous courses but also the facilitation of acquisition through the use of interaction and input (Long, 1996); Schmidt (1983) also states that adult learning is affected by interactions. Thus, use of web-assisted communicative technologies is highly common in tertiary level education (Negash et al., 2008).

Garrison and Vaughan (2008) expressed blended learning method to be the considerate combination of learning experiences conducted face-to-face and online; nevertheless, the approach to, and the application of, blended learning has changed in time. According to Stein and Graham (2014), blended courses let teachers combine onsite and online teaching modes so that they can offer new learning environments for their learners. Another method of blended learning known as flipped learning is "one of the most popular and universal models in recent years" (Bergman & Sams, 2012). As Korkmaz and Mirici (2021) point out, the learners study the assigned online material before coming to class, and "interactive tasks are conducted by the teacher during the lesson" (p. 2). This is in contrast to the teacher using the class hours for both giving the input on the subject and creating practice opportunities. The synchronous part of a flipped classroom could be conducted either face to face or online (Marshall, 2017; Marshall & Rodrigues-Buitrago, 2017). Although a combination of asynchronous and synchronous modes of teaching were being used by some institutions and several studies have been conducted on them, a need for the use of both of them has risen all around the world for almost all educational institutions during the pandemic.

Martin et al. (2020) came up with a term to talk about a mode of teaching that uses asynchronous and synchronous web-based learning elements in a blended format that is called 'bichronous online learning'. The learners who receive

education using this mode of online education take part in both real time activities using web-based conferencing tools and any other form of tools that let them work asynchronously anywhere, anytime. They believe that this form of learning helps both learners and teachers to overcome the difficulties faced when only one of these modes is used. These benefits and challenges are also experienced by educators in the context of language teaching as well. Some institutions that offer language courses adopt the blended mode in order to tackle the issues presented by one (such as using synchronous tools to supplement asynchronous tools) in order to provide their learners with interaction as it supports the learning process (Schmidt, 1983).

There are some studies that have dealt with several issues of these two modes of teaching and learning separately (Almalhy, 2016; Alqadoumi, 2012; Aydın & Erol, 2020; Harvil, 2018; Kentera, 2016; McCormick, 2018; Peng, 2010; Rockinson-Szapkiw, 2009; Wheeler, 2015; Yorgancı, 2013), but not much has been done about the combination of them, especially on the area of teacher perceptions in EFL context.

Statement of the Problem

Previous work has focused on the use of online education, synchronous and asynchronous online education, and a blend of these synchronous and asynchronous modes of online education. Some studies have also been carried out on learners' and teachers' perceptions regarding online education. However, there appears to be very little evidence of studies on teacher perceptions on bichronous online teaching – the blend of synchronous and asynchronous online education methods – in EFL context, which shows a gap in the literature to gain more insights into how meaningful and useful its use is. The number of courses with bichronous mode of delivery is increasing, and there is a need to investigate its benefits and challenges as it can help

to improve the approach to bichronous online teaching and help the teachers to apply it with more confidence, perhaps creating a need for more training in this mode of teaching. In order to carry out effective training, teachers' perceptions should be analyzed with regards to this topic.

Aims of the Study

The study attempted to examine the EFL instructors' perceptions about bichronous online teaching according to their age, academic qualification, professional qualification, years of experience in the profession, and perceived competence in the use of educational technologies.

Research Question

The study will focus on the following question:

1. Are there any differences in the perceptions of EFL instructors about bichronous online teaching within the framework of UTAUT (Venkatesh et al., 2003) with respect to their:

    a. age

    b. academic qualification

    c. professional qualification

    d. years of experience in the profession

    e. perceived competence in the use of educational technologies?

Significance of the Study

The findings of the study can be valuable to broaden the literature regarding online education as some studies can be found about synchronous or asynchronous online teaching; however, there are no existing studies about bichronous online teaching as it is a recently coined term. Also, there appears to be no existing studies that have examined if there are differences in the perceptions of EFL instructors

about using a blend of both synchronous and asynchronous modes of online teaching, namely bichronous online teaching. The findings of this study could potentially produce valuable information about perceptions of instructors about bichronous mode of online education, which might continue to be used in many educational settings as the pandemic continues. Another reason could be that some institutions might adapt their traditional education to a more integrated one where they also utilize at least some elements of bichronous online teaching for some reasons such as being more effective or practical.

The results of the study could also help to make alterations to the processes of teaching and learning of foreign languages at tertiary level institutions globally to benefit all stakeholders. The institutions might continue to use bichronous online teaching of the courses or programs that are suitable for distance learning. Another possibility could be to integrate the useful aspects of bichronous online teaching into their system.

Definition of Key Terms

Distance learning: is the learning process conducted at a distance that is mediated using different methods, tools and equipment involving technology and other formats of learning (Holden & Westfall, 2010; King et al., 2001).

Online education: is considered to be a learning environment that is non-traditional where students learn over the Internet and not in the presence of a teacher (Smith & Mitry, 2008).

Asynchronous education: is any kind of learning that happens outside of real-time interaction (Ally, 2007).

Synchronous education: is when real-time learning happens between student and instructors (Ally, 2007).

Web-based videoconferencing: is described as a tool or method that helps people across the globe to be able have real-time interpersonal connection and contact by means of 'video and audio' (Anastasiades, 2009).

Bichronous online learning: is the use of a blend of 'synchronous and asynchronous online learning' (Martin et al., 2020).

EFL: is an acronym that refers to "English as a Foreign Language" (Reid, 1995).

CHAPTER 2: LITERATURE REVIEW

Introduction

This chapter reviews relevant bibliography regarding the study's aim, that is to explore EFL instructors' perceptions about 'bichronous online teaching' in accordance with UTAUT according to their age, academic qualification, professional qualification, years of experience in the profession, and perceived competence in the use of educational technologies.

The literature review will address two main areas related to the research problem. The first section will share the literature related to online education and its different types, which will be followed by studies conducted to investigate the usage, benefits and drawbacks of online education. The third section will focus on literature related to teacher perceptions in terms of different forms of online education, and the chapter will end with studies conducted on teacher perceptions of a blended use of online education formats.

Online Education

Technology has been integrated into educational contexts for quite some time, and it is believed to offer many benefits (Bottino, 2014; LeShea, 2013; Yaşar, 2020). It has been used in different forms, one of which is distance education. Distance education forms the roots of online instruction, and it was created to support traditional education and to offer educational opportunities for a wider population of students. Radios and televisions were the first technological materials used for distance education, but these were thought to lack facilitation of learner interaction or group learning (Sumner, 2000). The use of computers in distance

education meant a new era for distance education, as it resulted in interactions between instructors and learners, and also among the learners (Dilbeck, 2008; Lewis et al., 1999). The Internet and the Web started a new era for distance education (Dilbeck, 2008) making synchronous and asynchronous usage between instructors and learners (and amongst learners) possible for them to interact, also facilitating group learning (Dilbeck, 2008; Matthews, 1999). This meant that it was possible for learning to occur anywhere and anytime (Paulson, 2001). According to Arabasz et al., (2003), there are three major forms of distance education: fully online, hybrid, and technologically-enhanced traditional. Distance education is also stated to be an instructional form to involve hybrid or blended courses, computer-based training, distance learning, satellite broadcast, video-streamed instruction, or different forms of synchronous or asynchronous web-based instruction with the help of information technologies along with the internet (Abdous & Yoshimura, 2010; Tallent-Runnels et al., 2006). Knowing this categorization and the development process is very important as distance education and online education tend to be used interchangeably while they cannot actually be. Many institutions tried to make use of distance education by offering only a few courses (or their entire program) online with the help of videos or computers, and also the Internet (Maitland, 2000).

Over the course of time, many types of distance education have become increasingly popular among educational institutions; online education, among all, stood out, especially at a specific level. Ally (2008) points out that "the use of the Internet to access learning materials; to interact with the content, instructor, and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning, and to grow from the learning experience" is what online learning process consists of (p.15-44). Allen and Seaman

(2010, 2014) defined online education as courses which deliver 80 percent of the materials in the course online with no in person meetings. Online education has been most commonly used among institutions that are at tertiary level (Robinson & Hullinger, 2008); however, during the pandemic, almost all educational institutions have adopted online education. The main distinction between distance and online education is the former is more of a self-study course while the latter is a virtual learning environment in which various modes might be used. Online education was categorized into three types: synchronous, asynchronous, and blended/hybrid (Allen & Seaman, 2010). Sundt (2014) argues that it is important to be able to distinguish between these categories as each has their own advantages, drawbacks and results.

Synchronous Online Education

Synchronous courses can be described as those where the teachers and learners are simultaneously logged onto a system and can get into touch with one another directly, and the teachers are leaders of both educational processes, teaching and learning (Shi & Morrow, 2006). They feature real-time meetings that are conducted online, hence the learners can participate in the course from anywhere. In recent years, this type of course has employed web-conferencing software to allow for real-time meetings of teachers and students, meaning that these tools can enrich the communication between the parties involved (Schullo et al., 2005). As a result, they facilitate a collaborative environment between participants in different locations (Gibson & Cohen, 2003; Suthers, 2001). This is one of the most significant aspects and benefits of this type of online education. The reasons why such a collaborative environment is an advantage are that these tools help the learners to build a community and overcome any feeling of isolation (Wang & Chen, 2007). The learners have a chance to communicate via online text chat, audio-conferencing, or

videoconferencing with the help of these tools (Chen et al., 2009), and all of these mean more possibilities of communication for all participants. The audio-visual communication option it provides during the real-time meetings offers the learners the chance to see the other learners and their teachers as well as hearing them. This makes the learners feel more comfortable, social and attentive, which combined help prevent feelings of isolation. The learners also have the chance to get on-the-spot feedback from their classmates and instructors. The importance of interaction has been emphasized by Folinsbee (2008), and it is believed to have a critical role for distance learning to be effective (Casarotti et al., 2002). All of these benefits provided by synchronous online education help the learners to be motivated and on task, resulting in a fruitful teaching and learning process, particularly in adult's language learning, as claimed by Schmidt (1983).

Asynchronous Online Education

The interactions between the teachers and learners are not real-time in asynchronous courses, and there are no class meetings as there are in synchronous education (Midkiff & DaSilva, 2000). It is stated to be an online course which offers no live interaction opportunities and online delivery of all, or the majority of, the content of the course (Allen & Seaman, 2014). Asynchronous courses offer flexibility to the learners in terms of when, how long and how fast they would like to study, and access any course materials independently (Sundt, 2014). Although it might seem to be more convenient for the learners considering that they can make the necessary arrangements about what, when and how they want to study, one of the biggest problems that they may experience is the possibility of lacking self-discipline. The learners enrolled in this type of online education need to be autonomous; if they are not, they may not be able to create realistic timetables, or

they may experience problems meeting deadlines that they set for themselves or the teachers set for them. Not being able to achieve their goals because of self-discipline issues may make them demotivated and unsuccessful.

Another problem that could be faced in this type of education is that there can be miscommunication between participants because of not being able to interact simultaneously with audio or visual tools to clarify meaning and not being able to do so in real-time. Another issue related to asynchronous online education could be a low level of learner participation as there might be no requirements for them to do so depending on the type of instruction employed by the institutions, which could result in lower learner engagement and success rates.

Another disadvantage might be the absence of instant feedback in this type of online learning method. In a classroom, it is often beneficial to be in real-time as the teachers have the chance to correct any mistakes made by students instantaneously which has the potential and the power to correct any errors, potentially preventing fossilization, and hopefully reinforcing the learners' knowledge. In a classroom, it is also possible to get immediate answers to any questions and clarification of any issues that the learners might have, which should make the learning more meaningful as well as improving the learners' understanding of any issues.

One of the biggest disadvantages of asynchronous learning stated in the literature is the fact that it lacks collaboration and a sense of community resulting in learners feeling isolated. This might result in dropping out of the courses or academic programs for some learners (Bejerano, 2008) because when learners do not have support from their classmates or teachers and work collaboratively with them, they may feel lost or not supported resulting in a reluctance to continue with study. A lack

of these factors might result in reduced learner satisfaction in terms of meeting their needs and accomplishing their goals (Cassel, 1968).

Blended/Bichronous Online Education

'Blended learning' is described as the blend of face-to-face and asynchronous online education, traditionally (Kruger, 2006; Lim et al., 2014; Maarop & Embi, 2016; Owston et al., 2008). It aims to evaluate any strengths and weaknesses of both educational settings and blend the use of them to create a better learning environment that can help to cater for the needs of the learners better. Another form of blended instruction is mixing synchronous live virtual classes with asynchronous discussion boards (Giesbers et al., 2013; Yamagata-Lynch, 2014), known as blended online instruction (Power, 2008). Another form is a combination of synchronous and asynchronous online education with traditional education. (McBrien et al., 2009; Owston et al., 2008; Vu & Fadde, 2013). These courses are thought to offer effective and flexible learning opportunities for learners; however, this depends on the style of delivery chosen by teachers or institutions. In one case, the decision could be having fewer hours of face-to-face education alongside web-based sources to support or facilitate learning in class. Alternatively, the format might include having the same hours of teaching as in a traditional classroom and online tool usage to support it, or, the aim might be to give the learners the option to follow the lessons either in class or using a mobile device or a computer from anywhere. The other sub-categories of blended learning are not explained in this chapter as the aim of this section is to make a transition to the current form of blended learning that was put forward by Martin et al (2020) – bichronous online learning – which is a combination of synchronous and asynchronous online modes of teaching.

There are several reasons why blended learning has attracted growing interest. The most general ones are the possibility of it to support learning, a decrease in costs and being more convenient and accessible (Stein & Graham, 2014). Blended learning is believed to be efficient in teaching to a great extent, and The US Department of Education published a report that inspected 51 empirical studies found that "instruction combining online and face-to-face elements had a larger advantage … than did purely online instruction" (Yates et al., 2009, as cited in Stein & Graham, 2014). This type of education offers the chance to decrease costs for not only the teachers and institutions, but also the students, as transportation, parking, or classroom/building costs would decrease. Blended courses can also lead to convenience and accessibility as learners and teachers do not have to travel, potentially have more flexibility as to fixed schedule traditional courses, and students may have more flexibility with managing their own time to complete tasks or assessments.

The most fundamental reason for the recent transition to this mode of online education is the ongoing pandemic. As the safest way to give and receive education is using online modes and platforms, most educational institutions have decided to use a blended online learning format – a mixture of traditional and online education offered in blended online instruction (Allen & Seaman, 2010). The format that is used consists of elements from both synchronous and asynchronous online education. Martin et al. (2020) created a new term for this mode of blended learning which is 'bichronous online learning'. Using both online education forms, synchronous and asynchronous, is believed to compensate for the disadvantages presented by other systems as learners have the opportunity of both having the flexibility of studying

anytime and anywhere, as well as interacting with their teachers and other learners in real time (Martin et al., 2020).

Use of Different Modes of Online Education in ELT

Like all subject areas, the teaching of a language has also been affected by improvements in technology, and online education has become essential for English language teaching for some time (Vovides et al., 2007). The very first definition for Computer Assisted Language Learning (CALL) posed was being a quest for 'language education' applications (Levy, 1997), and later its definition was changed to teaching and learning of languages by creating or utilizing some technological applications (Levy & Hubbard, 2005). "A variety of tools that supported language acquisition" (Berti, 2020) have been used for CALL which has aided learners in their language learning process in any context and via any computer technology (Egbert, 2005).

"Mobile-assisted language learning (MALL), digital game-based language learning (DGBLL), and multimedia" (Chen et al., 2021, p. 152), and "VR projects such as Google expeditions" (Kessler, 2021, p. 4), have also been utilized during the processes of language education by teachers and learners as they promote "learning through social participation, interaction, and collaboration" (Çakmak, 2020, p. 32). "Learning Management Systems (LMS) or Course Management Systems (CMS), such as WebCT, Blackboard, and Moodle" (Otto, 2017) have also been integral to language teaching and learning environments for several purposes from starting asynchronous discussion threads to creating glossaries, and sharing course materials to entering grades.

Instructors, institutions, and learners have utilized several procedures in language education processes over time, and many terms have been used to refer to

computer or internet use in language teaching; however, online learning/teaching is the most common and encompassing one being used today. While it is the umbrella term for online education types, there are still sub-categories and variations of it such as web-facilitated, synchronous online, asynchronous online, blended or hybrid, and bichronous online courses (Martin et al., 2020; Ellen & Seaman, 2011).

Hubbard and Levy (2006) state that having technology literacy is highly essential for language teachers as "both language teachers in training and practicing teachers will find themselves at a disadvantage if they are not adequately proficient in computer-assisted language learning" (as cited in Karatay & Hegelheimer, 2021, p. 272) or use of mobile technologies because they create opportunities to learn and teach languages "inside and outside the classroom" (Peng et at., 2021, p. 278). Online modes of learning are used to support pre-service English language teachers' education or the language education of the learners in tertiary level institutions. Kırkan and Kalelioğlu (2017) and West et al. (2015) state that online education and online resources are being used for supporting the language learning processes of students at English preparatory schools in Turkey as well (as cited in Erarslan & Arslan, 2020, p. 46).

Empirical Studies on Bichronous Online Education

A blended online learning approach has inspired international researchers. Rockinson-Szapkiw (2009) carried out a study that utilized mixed methods to investigate the influence of using synchronous CMC systems to support asynchronous ones on social, cognitive, and teacher presence alongside students learning in a web-based context. 347 graduate students along with undergraduate ones participated, and they were chosen with the use of convenience and snowball sampling. The results from the causal comparative part of the study revealed that for

students who used both CMC systems in a blended manner social presence levels were significantly higher than the students who only used asynchronous ones.

Wheeler (2015) designed a mixed methods study to explore the differences among learners' experiences in distance learning. The similarities and differences were observed among learners in two sections of an introductory technology course. The lessons were conducted using synchronously reinforced mode (synchronous and asynchronous) in one section. In the other, learners received education only with asynchronous mode. The quantitative findings suggested no significant results, but the qualitative results suggested the frequencies for clarification, collaboration, direct instruction, and interaction were higher for the group that received synchronous-enhanced education.

McCormick (2018) carried out a mixed methods study to evaluate the data to investigate if students of color had differing opinions on the effects of asynchronous and synchronous communication. The results indicated that asynchronous communication had a stronger impact than the synchronous one; however, synchronous webinars were instrumental in academic success according to the qualitative results.

Alqadoumi (2012) collected data from multiple resources with the purpose of evaluating and reporting the Arab ESL academic writers' experiences of attending asynchronous and synchronous tutoring sessions and the e-tutors delivering asynchronous and synchronized e-tutoring, and reporting on the benefits, problems, themes, and issues that emerge from the e-tutoring process for a quantitative study. The study reported the experiences of nine Arab ESL students enrolled in writing classes in Indiana University of Pennsylvania and three e-tutors. The study revealed that both sessions – asynchronous and synchronous – were thought to completement

each other in the e-tutoring process by e-tutors and e-tutees, and chat sessions after the feedback was important for both of them.

In a quasi-experimental study, Almalhy (2016) investigated if motivation levels of students in a blended ICT course were affected depending on the blended learning discussion formats used, the quality and quantity of posts on ADBs (asynchronous discussions board). The results indicated that there was no variance among the groups regarding motivation levels and quantity; however, there was a difference of significance regarding ADB quality scores. Moreover, the study was believed to aid in the improvement of the online practices of Saudi higher education via exploration of methods to improve collaboration and communication among students and educators.

Yorgancı (2013) carried out quasi-experimental research to investigate the implications of a blended synchronous and asynchronous mathematics course on learner success and the opinions about web-based distance education. The results suggested that the method employed was more efficient than the traditional ones for a mathematics course. Moreover, it also provided learners with the chances to save time, be flexible, learn independently and reach more content. However, most of the learners believed that interaction could not be set up in the environment they used as it would have been in a traditional classroom environment.

Perveen (2016) carried out a case study to analyze the analytics of e-learning. The findings of the study indicated asynchronous language learning to be highly advantageous by second language (L2) learners at the Virtual University of Pakistan. It was suggested that any disadvantages of the asynchronous form used may be supported by using synchronous sessions to overcome the issues. The results

concluded that the learners showed a preference for the use of a blended form of asynchronous and synchronous models for language learning.

Erarslan and Arslan (2020) carried out a qualitative research at a tertiary level institution in Turkey. The study attempted to understand the online learning experiences of first and second year ELT students taking online asynchronous courses either to support traditional courses or utilizing online content delivery. The results demonstrated that learners had not only positive but also negative views about online learning and thought that it helped them to develop e-autonomous study skills. Positive responses included: time efficiency, economic flexibility, comfort and practicality. However, negative opinions were evident regarding a lack of interaction, feedback and focus.

Teacher Perceptions on Online Education

Throughout the world, many institutions and teachers have integrated technology in the classes for several reasons. One of them could be just to show that they keep up with the developments while another to strengthen the educational processes to make them more helpful for all the stakeholders involved. Many instructors in educational institutions of all levels as well as people who offer private tutoring have been using some form of technology such as LMSs to manage and/or deliver educational material for some time thanks to the developments in technology (Psycharis et al., 2013). They are all aware that the use of technology might offer some benefits as well as creating some challenges. Fullan and Stiegelbaue (1991) and Fulkerth (1992) were the first to point out that it is all up to the teachers as they are the agents that create the shift from a traditional educational model to one which integrates technology. The administrators in the field of education might expect or assume that all the teachers have the technological equipment or knowledge for the

use of such items or resources, which might lead teachers who lack those items or skills to feel under pressure or even to feel inadequate to fulfill their job requirements. One very important thing to remember is that the perceptions of teachers impact the execution (Archambault et al., 2016; Gough et al., 2017).

Yaşar (2020) discovered that several factors can affect the perceptions of EFL instructors on technology use, such as their academic and professional qualifications, and years of experience in the profession. Furthermore, Qasem and Viswanathappa (2016) pointed out that an instructor perception about technological effectiveness is directly related to her or his intention of use – the more they find it beneficial, the more likely they are to utilize it. Some teachers in this era are only happy to use a computer when they need to use the internet for some reason in their classes or offices only. Others use several sources on the internet from games to websites, online versions of the books and/or materials, and the projectors as well so that the learners can also have an improved chance of following the stages and activities in the lesson. The latter group is much more comfortable with technology incorporation into the classroom. Furthermore, they are the ones that are supporters of online education. In most cases, they think that technology utilization eases their job to convey the information along with creating much more meaningful interaction with their learners (Denning, 1999), thus believing that they will become much more effective instructors through improved support of their learners (Young, 1997). On the contrary, there are also some instructors who fear using technology or are frustrated with some inabilities they believe they have, and this might prevent them from employing the use of anything related to it (Engeldinger, 1997). However, if they perceive their use of technology to be effective, or if using any form of technology created a change in their instruction and their learners' performances or

attitudes towards classes, they would most likely consider changing their attitudes towards integration of it as well as online courses.

Almost all teachers around the world had to get over their fears or insecurities about the use of education in 2020 because of the global pandemic and start to use technology and be a part of online education. Some of these instructors still may not feel particularly comfortable with using it, while others might be proud of the progress they have made in their views of technology because of a necessity.

For all these reasons, it is essential to review the theories and models relating to instructors' acceptance of technology. "The Unified Theory of Acceptance and Use of Technology (UTAUT)" established by Venkatesh et al. (2003) is the most recent theory that encompasses the elements that are believed to be important from the previous models. Venkatesh et al. (2003) identified *performance expectancy, effort expectancy, social influence,* and *facilitating conditions* as direct factors of user behavior and acceptance in the UTAUT model while "*attitude toward using technology, self-efficacy*, and *anxiety*" were not considered as first-hand factors. The primary moderators that were identified by Venkatesh et al. (2003) for the model were "gender, age, experience, and voluntariness" (p. 447) (Figure 1).

Figure 1

Research Model of "The Unified Theory of Acceptance and Use of Technology (UTAUT)"

Note. Reprinted from "User Acceptance of Information Technology: Toward a Unified View" by Venkatesh et al., 2003, *MIS Quarterly*, *27*(3), p. 447. Copyright 2003 by MIS Quarterly.

The key terms are defined in the model as follows:

1. *"Performance expectancy"* (p. 447) is defined to be how much someone considers employment of the system will aid his or her achievement in their occupational achievement by Venkatesh et al. (2003).

2. *"Effort expectancy"* (p. 450) is stated as how easy level of the utilization of the system is found by Venkatesh et al. (2003).

3. *"Social influence"* (p. 451) is described as how much someone is affected by the people that are important to them for them to use the system by Venkatesh et al. (2003).

4. *"Facilitating conditions"* (p. 453) is explained as how much someone considers that their institution has the infrastructure to help them while using the system by Venkatesh et al. (2003).

5. *"Attitude toward using technology"* (p. 455) is established as how someone responds to employing the system by Venkatesh et al. (2003).

As previously pointed out, Venkatesh et al. (2003) did not consider *"self-efficacy* and *anxiety"* as factors that affect intent since both were categorized very differently in comparison to *"effort expectancy"* (namely perceived ease of use) as a consequence of being not only conceptually but also empirically different (p. 455). Furthermore, Venkatesh et al. (2003) pointed out that *"self-efficacy* and *anxiety"* were expected to act alike in a way that would not influence *"effort expectancy"* in any explicit form (p. 455). Venkatesh et al. (2003) also stated that *"behavioral intention to use the system"* would affect technology use significantly (p. 456).

Teacher Perceptions on Synchronous and Asynchronous Online Education

Only synchronous or asynchronous modes of online education have been used exclusively around the world in the last decade most commonly, and the use of computer-mediated communication (CMC) for synchronous online education led to several possibilities to reinforce the educational processes and has been most commonly used in tertiary level institutions (Oblinger, 1996). CMC utilization includes various aspects from chatting to conferencing and e-mailing, all of which provide a collaborative learning environment that changes the relations among the teacher, student and course content (Oblinger, 1996) leading to a more authentic

environment for learning. A shift from traditional education to any of these modes presents problems for instructors as both change the major activities of an instructor (Marshall, 1999). Both require different views of instruction, and this might be very difficult for many instructors to understand (Marshall, 1999). The instructors need to have the ability to facilitate learning in online modes by creating learning experiences that could be considered as good (Eastmond & Ziegahn, 1995). The instructors are the ones who are challenged and in charge of creation of those conditions in both modes of online learning. The help of the teacher in both modes to create a collaborative learning environment means the learners will be more involved in the course of their learning and the lessons, which would be followed by an impact in the satisfaction level of the teacher from her students, instruction and job.

As there was a need to adopt an online education format offering flexibility to teach in anyplace and at any time (Hodges et al., 2020) globally in 2020, some institutions decided to make use of a synchronous only mode, while others used only asynchronous. The reasons for the choices could be the readiness of the institutions to integrate the aforementioned forms of online education to their system or model. In asynchronous only mode, teachers do not have any live interaction with the learners, and most or all content of a course is delivered online (Allen & Seamen, 2014); they just use some LMSs or even websites or e-mails to share the course related materials with their learners who use the same tools to reach their teachers or send them any documents independently of the other students in their classrooms (Sundt, 2014). When the satisfaction levels of these teachers are thought, it can be said that their workloads might have decreased a lot, but there was little chance for them to cater for the needs of their learners in real-time and to really identify and observe learners with issues or those who experience problems regarding a specific

subject or area. When the synchronous only mode of online education is considered
which brings the instructors and learners together with the help of live interaction
(Allen & Seamen, 2014), the teacher might have been overwhelmed with the
workload – depending on the institutional requirements – and might have felt fatigue
at times because they had to be involved in activities which required them to use
applications, websites or tools that enabled all the participants to engage in
interaction simultaneously (Wilson, 1997). If the teachers were lacking in confidence
in technology use and were not familiar with either mode of online education, they
are expected to have experienced difficulties in the process.

Teacher Perceptions on Bichronous Online Education

The idea of blended learning has changed in time with the generation and
advancement of online tools and their integration into the education systems. In the
traditional form of blended education, the blend consisted of the use of online tools
to complement the traditional education (Oliver & Stallings, 2014), which might
have been considered to be more comfortable by most teachers. The blend of
synchronous and asynchronous forms of online education, which is called as
'bichronous online learning' by Martin et al. (2020), might be considered to be
demanding and complicated by some teachers. A blended approach might make the
learning experience more learner-centered and enhance their learning process and
make the education more meaningful. According to Foulger and Jimenez-Silva
(2007), the use of technology for presenting various modes does make sense;
however, teachers who are not confident about their abilities of teaching by using
technology might experience some challenges in the process. Concerns have been
expressed by teachers about catering to learner demands (Téllez & Manthey, 2015).
Wilson (2021) stated that not having taught fully online using bichronous online

teaching earlier in his career, he had doubts and fears as to using online teaching as well – although he had been using half the session time as asynchronous as well. However, Wilson (2021) stated that after having used bichronous online teaching, he had found it successful and useful.

Empirical Studies on Teacher Perceptions on Bichronous Online Education

As previously pointed out, there appears to be little evidence of a study that focuses solely on teacher perceptions of using bichronous online education; however, there are some studies which are closely related. In 2016, Kentera conducted a qualitative study which aimed to obtain an expanded perspective on what enhances or hinders the satisfaction of facilitators with the Internet when it is used as a 'content source' for ESP (English for specific purposes) and ESL (English as a second language) synchronous and asynchronous lessons. The results revealed that facilitators perceptions and the advantages of using the Internet in education and their attitudes towards its use had a very strong positive correlation.

Harvil (2018) designed a phenomenological study to find out the perceptions of general education teachers about their technology use with learners that qualified for English Learner Services in a school district of Georgia to decide if they use of technology because of personal preference or environmental factors. The results showed that participants used technology every day with different purposes, and they viewed all them as universal strategies to be used with learners. The highlight of the study was that the confidence degrees of participants concerning the integration of technology differed depending on their perceived barriers.

Abarquez (2021) conducted a qualitative study that aimed to find what online instructional methods for distance learning were used while teaching the subject of Language and Literature in institutions of participants in the Philippines. The results

revealed that the new standard structure used in the programs offered flexibility to the language and literature programs in schools, sharpening the learners' macro abilities, aiding learners understanding and appreciation of the analysis of literacy.

In a qualitative study conducted by Peng in 2010, the aim was to investigate the determinants that add to or limit the development and execution of courses that are online and to what extent the perspectives of the program directors and ESL teachers affected the online ESL education. The findings indicated that factors such as instructors' ability and availability; their knowledge and experience; lack of support from their institutions; concerns about the quality of the courses; lack of privacy of the online environment; and online courses' being time consuming, hindered the implementation of online ESL courses. Conversely, convenience and advantages of using online technology; availabilities of resources; the implementation of online technology of the school; and top-down pressure, fostered the implementation of online ESL courses.

Aydın and Erol (2020) conducted a phenomenological study to investigate the Turkish language teachers' views on distance education and digital literacy, in Turkey. The results revealed that there were problems related to learner presence; digital problems regarding internet connections, infrastructure, and system used; engagement, involvement and dedication; literacy problems, in particular the incompetence of distance education in improving written skills of the learners; insufficient class numbers and duration, as well as lack of parent-student-teacher collaboration.

Conclusion

This chapter has provided literature overview related to two major areas of the research problem. The first part was about online education, its types and

empirical studies on it, while the second part focused on teacher perceptions on online education and empirical studies on bichronous online education.

CHAPTER 3: METHODOLOGY

Introduction

The study seeks to explore the perceptions of EFL instructors about bichronous online teaching. It is intended to examine the existence of any differences between EFL instructors' groups on the basis of age, academic qualification, professional qualification, years of experience in the profession, and perceived competence in the use of educational technologies with regard to their perceptions in using bichronous online teaching. To this end, the following research question is posed:

1. Are there any differences in the perceptions of EFL instructors about bichronous online teaching within the framework of "Unified Theory of Acceptance and Use of Technology" (Venkatesh et al., 2003) with respect to their:

    a. age

    b. academic qualification

    c. professional qualification

    d. years of experience in the profession

    e. perceived competence in the use of educational technologies?

The chapter presents comprehensive information on the study's methodological approach. The chapter organization is as follows: the research design, setting and participants, methods of data collection and analysis.

Research Design

The study is a quantitative, descriptive, and cross-sectional survey study. Initially, it is quantitative as the data was collected by means of an online survey that comprised mostly of Likert-scale items. Quantitative studies produce reliable and generalizable data as they are described to entail exact measurement (Dörnyei, 2007). Second, it is a descriptive study as the aim is to explain the EFL instructors' perceptions on bichronous online teaching, and descriptive studies deal with the "what" rather than "how" or "why" (Gall et al., 2007). It is a non-experimental study as researchers determine the variables and search for associations between the variables without tampering with them at all (Ary et al., 2006). The cross-sectional questionnaire employed required the data to be collected at one instant in time (Fraenkel et al., 2012). This research type helps to form link associations among the variables of the study (Dörnyei, 2007), and to explore the opinions, behaviors and feeling of participants, therefore, the researcher chose to employ it so that she can answer the research question posed. This study can also be considered as a comparative one (Castellan, 2010) as it explores the differences in the perceptions of EFL instructors about bichronous online education with respect to their age, academic qualification, professional qualification, years of experience in the profession, and perceived competence in the use of educational technologies. Age, academic qualification, professional qualification, years of experience in the profession, and perceived competence in the use of educational technologies were all categorical variables, while the constructs from the framework were continuous variables.

Setting and Participants

The study took place at the preparatory school of a Turkish public university. The education is conducted using English at this university, and the school provides the learners with a year-round English program to prepare them for their undergraduate departmental education. The learners take an English language proficiency exam or an exam for placement into the right levels at the beginning of the academic year. Those who fail the former are located at a level according to their score, and those who take the latter are placed similarly into one of the five levels at the school.

The fall semester levels were beginner, elementary, pre-intermediate, intermediate, and upper-intermediate. The number of learners in every class varied from 20 to 22 with a total of 3172 students. The contact hours of levels differed at each level. The school started to offer all the classes in online format as of March 2020, and both synchronous and asynchronous forms of education were used. Beginner group learners, who progressed to pre-intermediate in the spring semester, had 25 hours of synchronous online instruction weekly. The synchronous online instruction hours of the elementary, pre-intermediate, and intermediate group learners were 20 each week in the fall semester. The levels for the groups in the following semester following the same order were lower-intermediate, intermediate, and upper-intermediate. For the lower-intermediate, and intermediate group learners, the class hours in the spring semester were the same, while the upper-intermediate group learners were provided 15 weekly hours of synchronous online instruction. The contact hours of the upper-intermediate level learners who progressed to advanced level in the spring semester were the same in each semester with 10 hours of synchronous online instruction a week. The contact hours of the levels were

different from the ones they had during face-to-face education as there was a five-hour reduction in each level during bichronous online teaching. The learners at all levels were also assigned some asynchronous activities or tasks that needed to be completed before a deadline set by the instructors of their classes. Students of each level had to participate in asynchronous activities or tasks that were set by the institution as well as any other extra ones that were specifically assigned by the instructors of their classes. Each semester lasted 16 weeks. Information concerning the contact hours of the levels without reduction is presented in Table 1.

Table 1

The Fall and Spring Semester Contact Hours of the Levels without Reduction

Fall Semester			Spring Semester	
Levels	Contact Hours		Levels	Contact Hours
Beginner	25	→	Pre-intermediate	25
Elementary	20	→	Lower-intermediate	20
Pre-intermediate	20	→	Intermediate	20
Intermediate	20	→	Upper-intermediate	15
Upper-intermediate	10	→	Advanced	10

In the 2020-2021 academic year, there were 200 instructors at this institution. There were 23 male and 177 female instructors. Seven were international and 193 were local instructors. The ages of the instructors at the institution ranged from 25 to 55+, and their years of experience in the profession had a variance of 30+ years.

All these instructors have received one-year in-service training that is compulsory, and the education is provided by the trainers working at the same establishment. In this program, some instructive meetings, evaluated lesson and peer observations, tasks and reflection assignments are included. The institution supports

the instructors who want to attend programs or activities for professional development as much as they can. There are instructors with different academic qualifications – undergraduate degrees, MA and Ph.D. degrees in different fields, and other teaching qualifications such as CELTA (Certificate of English Language Teaching to Adults), DELTA (Diploma of English Language Teaching to Adults), ICELT (In-service Certificate in English Language Teaching) and other teaching certificates (see: Appendix G). The instructors employed after November 9, 2018 all have MA degrees as a legislation was published which made this a compulsory requirement for employment.

The teaching hours of the instructor depend on the level they teach; they make preferences as to the levels they want to teach at the beginning of each semester, and they are assigned to one by the school administration based on a certain set of criteria. When this study was conducted, all the instructors in this context were teaching 10-25 hours a week from home, a decision made by the Council of Higher Education in Turkey that was applied by the university senate. The workload of instructors may not have consisted of only their teaching hours for their departmental duties as some teachers might have also preferred to teach some weekday or weekend courses offered by the institution. The contact hours of these courses could have ranged from 8 to 14 hours a week, which resulted in differing individual workloads. The instructors used bichronous online teaching for all their teaching duties. As proposed by Yaşar (2020) and Engeldinger (1997), the competence of the instructors in this context in the use of educational technologies was assumed to differ depending on some factors such as age, personal and professional qualifications, years of experience in the profession, being able to use

technology, or technology acceptance or technophobia, as all their beliefs might have acted as barriers or facilitators when using technology.

This study was administered in this institution for several reasons. The first reason was the use of synchronous and asynchronous online modes of teaching. A system was already in place which allowed the school administration and lecturers to utilize asynchronous and synchronous tools to support the classroom practices before the pandemic, and once the state announced that online education would be conducted, they made a direct switch to a form of online education which employed both synchronous and asynchronous online modes of teaching and tools. Bichronous online education was offered to its students for two years in total. The second reason was commonalities. This institution shared common characteristics with all other higher education institutions in Turkey as all the universities need to implement the same university structure by following the same laws, rules, and regulations set by the state and Council of Higher Education. All institutions are also required to accept students from the same pool (K12 education), and the instructor profiles are quite similar, which would help in generalizing the results. The students also share some commonalities with other preparatory schools around Turkey as all the learners go through the same K12 education and university entrance system.

The aim of quantitative research is to examine a phenomenon by means of studying with a smaller group, called the *sample* regarding a broader one, called the *population* (Gall et al., 2007). As it is not easy to reach the whole population for any researcher, the most important step in research is in the process of participant selection called sampling (Fraenkel et al., 2012). In this case, the population is the EFL instructors in tertiary level institutions in Turkey, and the sample is the EFL instructors explained earlier in this section. For a sample to be acknowledged as an

expectable one, it should represent the whole population as there is a need for them to be alike in terms of most of the characteristics (Dörnyei & Taguchi, 2010). Due to the reasons regarding the commonalities between this institution where this study was conducted and other similar institutions in Turkey, the findings of this study could be considered as representative for the population of EFL instructors working in similar schools in Turkey.

An electronic mail consisting of the link to the online survey was sent to all of the instructors working at the institution, and the ones who took the survey are the participants of this study. The views on sample size differ depending on the designs of research; however, Dörnyei and Taguchi (2010) point out the minimum sample size for any kind of study as at the very least 30, so the aim was to have at least 30 people for all the independent variables.

When the data were collected in the 2020-2021 Spring semester, there were 200 instructors working at the school. Initially, eight instructors helped with the piloting stage. The number of instructors that participated in the actual study was 133. The information about the demographics of the participants of the study is provided in Table 2 (below):

Table 2

Information about the Participants of the Study

Demographic Information	n
Gender	
Female	120
Male	11
Prefer not to mention	2

Table 2 (cont'd)

Information about the Participants of the Study

Demographic Information	*n*
Age	
22 – 27	1
28 – 35	29
36 – 45	65
46-54	25
Department of the Highest Degree Completed	
English Language Teaching	69
American/British Literature and Culture	34
Linguistics	6
Translation	1
Other	23
Other Professional Qualifications (Most recent)	
CELTA/ICELT	20
DELTA (All 3 modules completed)	10
DELTA (1 or 2 modules completed)	14
Other teaching certificates	34
None	55
Years of Experience in the Profession	
1 – 3	0
4 – 9	9
10 – 19	69
20 – 29	44
30+	11
Perceived Competence in the Use of Educational Technologies	
Not Competent	0
Somewhat Competent	6
Competent	96
Very Competent	31

Methods of Data Collection

Data collection was administered by an online survey (Appendix C). An informed consent form which assured that the identity of the participants would be concealed was provided at the beginning of the survey (Appendix A). The survey consisted of two main parts: the EFL instructors' demographic information and their perceptions on bichronous online teaching.

The first section which was about the demographic information of the participant was designed by the researcher. It asked the participants' information regarding gender, age, academic qualifications, professional qualifications, years of experience in the profession, and perceived competence in the use of educational technologies.

For the second part of the survey, the researcher employed "the Unified Theory of Acceptance and Use of Technology (UTAUT)" model by Venkatesh et al. (2003). This specific model was utilized for the study as it is the most recent and encompassing one. It consisted of the elements important from the previous models, and as it was the most related one that included the constructs that the researcher aimed to study while exploring the behavioral intentions and perceptions of the language teachers. A survey was created (Appendix C) by adapting this model. The adaptation seemed necessary as the constructs in the original survey were "p*erformance expectancy, effort expectancy, attitude toward using technology, social influence, facilitating conditions, self-efficacy, anxiety,* and *behavioral intention to use the system"* (Venkatesh et al., 2003, p. 460); however, the participants who were to take the questionnaire had already used the bichronous online teaching. Therefore, the constructs and items needed to be revised to include bichronous online teaching rather than technology in general and to make the questions relevant for teachers who

had already experienced bichronous online teaching rather than those who had the potential to use it. This was needed as no established data collection tool could be found to collect data on instructor perceptions of bichronous online teaching, specifically.

Adaptations

While adapting the survey, the wording of some of the constructs was changed under the framework in order to fit the topic by changing the parts with wordings such as 'the system' and 'technology' to 'bichronous online teaching' since the area the study was focusing on was not a system but this specific teaching method. A similar change was also made to the questions in the original questionnaire as they all had 'the system' in them. Another modification was for the items that included the term 'expectancy' in them as the instructors had already been using this method of teaching for around one year and were already familiar with it. Therefore; this term was removed from the respective constructs.

In the end, the constructs that were covered in the study were performance, effort, attitude toward bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety, and behavioral intention to use bichronous online teaching. The aims of the questions for each construct are as follows:

- o Performance → the beliefs of the instructors to ascertain whether bichronous online teaching helped them to have a successful performance in their jobs
- o Effort → the beliefs of the instructors on how easy they found the use of bichronous online teaching
- o Attitude toward using bichronous online teaching → instructor beliefs on their reaction to using bichronous online teaching

- Social influence →the beliefs of the instructors on how effective the people important to them were in their use of bichronous online teaching

- Facilitating conditions → the beliefs of the instructors on the extent of a support system or infrastructure for bichronous online teaching

- Self-efficacy → the beliefs of the instructors on their sense of capability and self-confidence in using bichronous online teaching

- Anxiety → the beliefs of the instructors on their feelings of nervousness about using bichronous online teaching

- Behavioral intention to use bichronous online teaching → if instructors would use bichronous online teaching in the future provided that they had the decision-making power

The same modification was made to some of the questions that necessitated this change for the same reasons. Another adaptation was omitting one of the questions under performance expectancy in the original questionnaire, which was 'If I use the system, I will increase my chances of getting a raise" (Venkatesh et al., 2003, p. 460), because the institution where the study was conducted never gives raise based on teacher performance. It was a state institution, and it had a set state salary scale. The second part of the survey consisted of Likert-scale items with a scale that ranged from *Strongly Agree* to *Strongly Disagree*. The items written were reviewed by colleagues who had Ph.D. degrees and prior knowledge of item writing to provide validity.

Upon getting Ethics Committee permissions from Bilkent and the university where this study was carried out, the pilot study was administered.

Pilot Study

A pilot study was conducted since piloting a study is fundamental for the purposes of deciding if the data collection methods and tools are feasible and useful, and as it aids researchers to make revisions on any items that are problematic before conducting the actual study (Mackey & Gass, 2005).

An e-mail that consisted of the link to the pilot survey (Appendix B) was sent to nine instructors at the institution where the study would be conducted on 23rd of March, 2021. These participants were selected based on the variety of their ages, academic qualifications, professional qualifications, years of experience in the profession, and perceived competence in the use of educational technologies. Out of these nine instructors, eight of them completed it.

These participants were asked to give qualitative feedback regarding the phrasing and clarity of the survey items for face-validity. Some feedback was provided for some of items. One participant was unsure about the meaning of second question of the second part of the survey ('teaching tasks'), therefore, to better fit the contextual use of terms, the wording was changed to 'teaching responsibilities'. The fourth question in the second part of the survey was also modified. A participant stated that 'my interaction with bichronous online teaching' was unclear, as they thought it might have been related to what they would or would not do in classes or their interaction with the upper-level management. Therefore, the phrase was modified to 'using bichronous online teaching' for clarity. Another comment was about the 29th, 30th and 31st questions in the same part. One participant said that she was concerned about the fact that it was the institution's decision whether to continue using bichronous online teaching and that they did not really have a say in it, which they perceived as being unclear. Thus, 'if I have the decision-making power' was

added to all three questions to capture the teachers' own preferences about their intentions of using bichronous online teaching in the future.

   After getting the results from the pilot study, the researcher made some adjustments to the questionnaire. Following the adaptations, the actual study was administered (Appendix C). The link to the online survey was shared with the participants via an e-mail which had information concerning the details of the study and assured the confidentiality of the participants (Appendix A).

Item Reliability Analysis

   Cronbach Alpha aids the researcher when measuring the internal consistency among the items in their tools (Cohen et al., 2018). A measure of over .70 is regarded as internally consistent for a test (Muijs, 2004). However, 'Cronbach Alpha' levels above .45 can also be considered sufficient (Taber, 2017). Following the data collection from 133 participants, internal consistency of the data collection tool was assessed, Cronbach Alpha levels of each construct were checked (Table 3).

Table 3

Cronbach Alpha Levels of Items regarding Perceptions on Bichronous Online Teaching in the Actual Study

Sections of the Survey	Cronbach's Alpha
P	.87
E	.90
ATUBOT	.93
SI	.77
FC	.65
SE	.66
A	.80
BITUBOT	.99

The Cronbach Alpha level for performance was found to be .87, which meant the items were fairly reliable. The values of the corrected item-total correlation for the items were .76, .72, and .82, respectively.

Effort section was also found to be fairly reliable with a Cronbach Alpha of .90. The values of the corrected item-total correlation for the items were .73, .81, .74 and .80, respectively.

The first Cronbach Alpha level that was obtained before reverse coding for attitude toward using bichronous online teaching was .59, and for each item of the section the corrected item-total correlation values were .66, -.71, .81, .85, and .78, respectively. The Cronbach Alpha level for attitude toward using bichronous online teaching was found to be .93 after the reverse coding, which meant the items were exceptionally reliable. The corrected item-total correlation values for the items were .83, 71, .82, .83, and .87, respectively.

The social influence section was also found to be reliable with a Cronbach Alpha of .77. The values of the corrected item-total correlation for the items were .61, .61, .49 and .60, respectively.

For facilitating conditions, the first Cronbach Alpha level that was obtained before reverse coding was .15, and for each item of the section the corrected item-total correlation values were .33, .30, -.32, and .25, respectively. The level for facilitating conditions was found to be .65 after the reverse coding, which meant the items were not reliable. The values of the corrected item-total correlation for the items were .61, 50, .32, and .35, respectively. Eliminating the items would not boost the reliability of the study, which is why the items were not discarded.

The self-efficacy section was also found not to be reliable with a Cronbach Alpha of .66. The values of the corrected item-total correlation for the items were

.04, .53, .62 and .60, respectively. However, eliminating the items would not boost reliability, so the items were not discarded.

The Cronbach Alpha level for anxiety was found to be .80, which meant the items were reliable. The corrected item-total correlation values for the items were .42, 74, .76, and .67, respectively.

Behavioral intention to use bichronous online teaching section was also found to be extraordinarily reliable with a Cronbach Alpha of .99. The values of the corrected item-total correlation for the items were .97, .98, and .97, respectively.

Methods of Data Analysis

The data that was acquired through the survey of the actual study was analyzed quantitatively using SPSS by making use of descriptive and inferential statistics. A descriptive analysis was carried out for frequencies, percentages and averages of the variables, and inferential analysis was conducted for making interpretations about variables using statistical tests. Table 4 (below) presents the variables, groups and the tests conducted.

Table 4

The Variables, Groups, and Tests Conducted

Variable	Groups	Tests Conducted
Age	Instructors who are 35 or younger	One-way
	Instructors who are 36 – 45	ANOVA
	Instructors who are 46 or older	

Table 4 (cont'd)

The Variables, Groups, and Tests Conducted

Variable	Groups	Tests Conducted
Academic Qualifications	Instructors with Bachelor's Degrees Instructors with Post Bachelor's Degrees	Independent Samples T-test
	Instructors with Bachelor's Degrees Instructors with Master's Degrees	Independent Samples T-test
	Instructors with ELT Degrees Instructors with Language related Degrees Instructors with other Degrees	One-way ANOVA
Professional Qualifications	Instructors with CELTA/ICELT/COTE Instructors with DELTA Instructors with other certificates Instructors with no certificates	One-way ANOVA
	Instructors with some sort of certificates Instructors with no certificates	Independent Samples T-test
Years of Experience in the Profession	Instructors with less than 20 years of experience Instructors with 20 or more years of experience	Independent Samples T-test
Perceived Competence in the Use of Educational Technologies	Instructors who perceive themselves very competent Instructors who perceive themselves competent and some-what competent	Independent Samples T-test

For the age variable, the statistical test used was One-way ANOVA because there were three groups whose age-related categorical answers were to be tested against the constructs in the framework. The groups created were the instructors who

were 35 or younger, 36 to 45, and 46 or older as a One-way ANOVA test requires a minimum of three groups. For the academic qualification, the statistical tests used were independent samples t-tests and One-way ANOVA. The first independent samples t-test was used to test the perceptions of instructors who had Bachelor's degrees and post Bachelor's degrees against the variables from the framework. The grouping was done in a way to see whether having undergraduate and graduate degrees have a role in shaping the perceptions of the instructors. The second independent samples t-test was utilized to test the perceptions of instructors who had Bachelor's degrees and Master's degrees against the constructs in the framework, namely 'performance, effort, attitude toward bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety, behavioral intention to use bichronous online teaching'. The groups were created in a way to compare the perceptions of the instructors with undergraduate degrees and Master's degrees only as there was an insufficient number of participants with Ph.D.'s. One-way ANOVA was used to test the perceptions of instructors with ELT, language related and other degrees as academic qualification for each construct in the framework. The groupings were done in this way looking at the number of participants for each department, and by combining the participants with degrees from American/British Literature and Culture, Linguistics and Translation departments into Language related to have a more meaningful result. For the professional qualification, One-way ANOVA and independent samples t-test were used. One-way ANOVA was used to test the perceptions of four groups with different professional qualifications against the constructs in the framework. Independent samples t-test was used to test the perceptions of two groups with different professional qualifications against the variables from the framework. For the years of experience in the profession,

independent samples t-test were used as two age groups' perceptions regarding the variables from the framework were tested. The groups were created in a way to compare the perceptions of the instructors with less and more than 20 years of experience in the profession, and to have more valid results. For perceived competence in the use of educational technologies, the statistical test utilized was of independent samples t-test since the perceptions of two groups with different perceived competencies regarding the constructs in the framework were tested. The groups created were the instructors who considered themselves very competent and the ones who considered themselves either competent or somewhat competent. In order to ensure that the assumption of homogeneity of variances was fulfilled, Levene's test for equality of variances was conducted for each t-test.

Conclusion

The methodological approaches of the current study were demonstrated by in the order of research design, setting and participants, methods of data collection and methods of data analysis in detail.

CHAPTER 4: RESULTS

Introduction

The study was carried out with the intention to investigate the existence of any possible differences in the perceptions of EFL instructors on using bichronous online teaching on the basis of their ages, academic qualifications, professional qualifications, years of experience in the profession, and perceived competence in the use of educational technologies. The following research question was asked:

1. Are there any differences in the perceptions of EFL instructors about bichronous online teaching within the framework of "Unified Theory of Acceptance and Use of Technology" (Venkatesh et al., 2003) with respect to their:

   a. age

   b. academic qualification

   c. professional qualification

   d. years of experience in the profession

   e. perceived competence in the use of educational technologies?

The data were collected via an online survey using Survey Monkey. The items regarding the perceptions of instructors on the use of bichronous online teaching were taken and adapted from Venkatesh et. al. (2003) (Appendix C), and there were eight constructs: performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety and behavioral intention to use bichronous online teaching. The participants responses to the eight constructs were used to examine their perceptions regarding bichronous

online teaching with respect to their ages, academic qualifications, professional qualifications, years of experience in the profession, and perceived competence in the use of educational technologies. Descriptive and inferential statistics tests were run using SPSS v.26 for analyzing the quantitative data that was obtained with the help of the survey mentioned above.

This chapter intends to present the findings of the current study which aimed to explore the EFL instructors' perceptions about bichronous online teaching.

Results of the Study

Perceptions on Bichronous Online Teaching Depending on Age

One-way ANOVA test was utilized to generate results for the first part of the research question that attempted to find differences in the perceptions of EFL instructors with differing ages with regard to the constructs in the framework. The means and standard deviations for each construct were calculated for the perceptions of the instructors with different age groups regarding eight constructs. (Table 5).

Table 5

Means and Standard Deviations for Perceptions of Instructors with Different Age Groups on Bichronous Online Teaching

Dependent Variable	35 or younger		36 – 45		46 or older	
	M	*SD*	*M*	*SD*	*M*	*SD*
P	4.01	0.66	3.90	0.88	3.48	0.81
E	4.23	0.49	4.02	0.77	3.68	0.71
ATUBOT	3.44	0.49	3.41	0.58	3.13	0.51
SI	3.83	0.51	3.79	0.61	3.64	0.52
FC	3.76	0.35	3.63	0.41	3.63	0.38
SE	3.49	0.61	3.69	0.65	3.47	0.60
A	1.99	0.53	2.11	0.63	2.15	0.84
BITUBOT	3.76	0.81	4.08	1.05	3.25	0.98

The results indicate that the attitudes of the instructors towards bichronous online teaching change depending on their age groups. For example, the instructors who were 35 or younger had a more favorable attitude toward their performance when using bichronous online teaching with a mean score of 4.01. The instructors who were 45 or older had a mean score of 3.68 for effort, showing that they consider bichronous online teaching to require more effort. The group of instructors who were 45 or older are the ones that intend to use bichronous online teaching less with a mean score of 3.25. The lowest mean scores can be observed for anxiety across all groups; nonetheless, the mean score of 2.15 for the group of instructors who were 46 or older indicates that these instructors felt more anxious about the use of bichronous online teaching. The mean and standard deviations for each question of each construct can be found in Appendix D.

Table 6 shows the results of the one-way ANOVA test conducted for perceptions of the instructors with different age groups (35 or younger, 36 – 45, and 46 or older) regarding each construct.

Table 6

Means, Standard Deviations, and One-Way Analyses of Variance for Perceptions of Instructors with Different Age Groups on Bichronous Online Teaching

Dependent Variable	35 or younger		36 – 45		46 or older		$F(2,130)$	η^2
	M	SD	M	SD	M	SD		
P	4.01	0.66	3.30	0.88	3.48	0.81	4.197*	.061
E	4.23	0.49	4.02	0.77	3.68	0.71	5.342**	.076
ATUBOT	3.44	0.49	3.41	0.58	3.13	0.51	3.597*	.052
SI	3.83	0.51	3.79	0.61	3.64	0.52	1.108	.017
FC	3.76	0.35	3.63	0.41	3.63	0.38	1.356	0.20
SE	3.49	0.61	3.69	0.65	3.47	0.60	1.826	.027
A	1.99	0.53	2.11	0.63	2.15	0.84	0.550	.008
BITUBOT	3.76	0.81	4.08	1.05	3.25	0.98	8.299***	.113

*$p < .05$, ** $p < .01$, *** $p < .001$

The results showed a difference among groups with regard to performance ($F_{2,130} = 4.19$, $p = .017$, $\eta^2 = .06$), effort ($F_{2,130} = 5.34$, $p = .006$, $\eta^2 = .08$), attitude toward using bichronous online teaching ($F_{2,130} = 3.59$, $p = .030$, $\eta^2 = .05$), and behavioral intention to use bichronous online teaching ($F_{2,130} = 8.29$, $p < .001$, $\eta^2 = .11$).

Age groups and performance. The results of the One-way ANOVA test showed that there was a significant difference among the groups of instructors in terms of performance ($F_{2,130} = 4.19$, $p = .017$, $\eta^2 = .06$) (Table 6). The effect size, measured using ŋ², was 0.06, revealing that age had a medium effect on performance. Bonferroni correction was chosen for the multiple comparisons as the groups' sample sizes were not equal for the groups. The number of instructors in the groups which were 35 or older, 36 to 44, and 45 or older were 30, 65, and 38 respectively. The Bonferroni correction post hoc test was run to determine which groups differed from one another with respect to their performance in bichronous online teaching (Table 7).

Table 7

Multiple Comparisons Table for Performance in Bichronous Online Teaching (Bonferroni Correction Results)

Dependent Variable	Age	Age	Mean Difference	Standard Error	p
P	35 or younger	36 – 45	0.105	0.181	1.000
		46 or older	0.529	0.203	.031
	36 – 45	35 or younger	-0.105	0.181	1.000
		46 or older	0.423	0.170	.042

Table 7 (cont'd)

Multiple Comparisons Table for Performance in Bichronous Online Teaching (Bonferroni Correction Results)

Dependent Variable	Age	Age	Mean Difference	Standard Error	*p*
P	46 or older	35 or younger	-0.529	0.203	.031
		36 – 45	-0.423	0.170	.042

While the mean scores of the instructors who were 46 or older was 3.48 (*SD* = 0.818) for performance, the ones who were 35 or younger and 36 to 45 had mean scores of 4.01 (*SD* = 0.669), and 3.90 (*SD* = 0.887), respectively. Bonferroni post hoc test pointed out that the perception of the group of instructors who were 46 or older significantly differed statistically from the other two groups (the instructors who were 35 or younger and 36 to 45).

Age groups and effort. The results of the One-way ANOVA test indicated that there was a significant difference among the groups with respect to effort ($F_{2,130}$= 5.34, p = .006, η^2 = .08) (Table 6). The effect size, measured using ŋ², was 0.08, revealing that age had a medium effect on effort. The Bonferroni correction post hoc test was run to identify which groups differed from one another with respect to their effort in bichronous online teaching. (Table 8).

Table 8

Multiple Comparisons Table for Effort in Bichronous Online Teaching (Bonferroni

Correction Results)

Dependent Variable	Age	Age	Mean Difference	Standard Error	p
E	35 or younger	36 – 45	0.210	0.154	.522
		46 or older	0.552	0.173	.005
	36 – 45	35 or younger	-0.210	0.154	.522
		46 or older	0.341	0.145	.060
	46 or older	35 or younger	-0.552	0.173	.005
		36 – 45	-0.341	0.145	.060

With respect to effort, Bonferroni post hoc test showed that the mean score for the instructors who were 46 or older ($M = 3.68$, $SD = 0.716$) was significantly different from the instructors who were 35 or younger ($M = 4.23$, $SD = 0.491$), meaning that they showed more effort. Effort of the instructors who were 36 to 45 ($M = 4.02$, $SD = 0.770$) did not differ significantly from either the instructors who were 46 or older or 35 or younger.

Age groups and attitude. The results of the One-way ANOVA test showed that there was a significant difference among the groups with regard to attitude toward using bichronous online teaching ($F_{2,130} = 3.59$, $p = .030$, $\eta^2 = .05$) (Table 6). The effect size, measured using η^2, was 0.08, revealing that age had a weak effect on attitude toward using in bichronous online teaching. The Bonferroni correction post hoc test was run to identify which groups differed from one another with respect to their attitude toward using in bichronous online teaching (Table 9).

Table 9

Multiple Comparisons Table for Attitude Toward Using Bichronous Online Teaching

(Bonferroni Correction Results)

Dependent Variable	Age	Age	Mean Difference	Standard Error	*p*
ATUBOT	35 or younger	36 – 45	0.022	0.120	1.000
		46 or older	0.301	0.135	.083
	36 – 45	35 or younger	-0.022	0.120	1.000
		46 or older	0.279	0.113	.045
	46 or older	35 or younger	-0.301	0.135	.083
		36 – 45	-0.279	0.113	.045

For their perceptions on attitude toward using bichronous online teaching, Bonferroni post hoc test indicated that that the mean score for the instructors who were 46 or older (*M* = 3.13, *SD* = 0.514) was significantly different from the instructors who were 36 to 45 (*M* = 3.41, *SD* = 0.584), meaning that they had a more negative attitude toward it. Attitude toward using bichronous online teaching in the group of instructors who were 35 or younger (*M* = 3.44, *SD* = 0.496) did not differ significantly from either the instructors who were 46 or older or 36 to 45.

Age groups and behavioral intention. The results of the One-way ANOVA test indicated that there was a significant difference among the groups with regard to behavioral intention to use bichronous online teaching ($F_{2,130}$= 8.29, $p < .001$, η^2 = .11) (Table 6). The effect size, measured using ŋ², was 0.11, revealing that age affected behavioral intention weakly. The Bonferroni correction post hoc test was run to identify which groups differed from one another with respect to their behavioral intention to use bichronous online teaching (Table 10).

Table 10

Multiple Comparisons Table for Behavioral Intention to Use Bichronous Online

Teaching (Bonferroni Correction Results)

Dependent Variable	Age	Age	Mean Difference	Standard Error	*p*
BITUBOT	35 or younger	36 – 45	-0.322	0.216	.417
		46 or older	0.507	0.243	.119
	36 – 45	35 or younger	0.322	0.216	.417
		46 or older	0.830	0.203	<.001
	46 or older	35 or younger	-0.507	0.243	.119
		36 – 45	-0.830	0.203	<.001

The mean score of instructors who were 46 or older was 3.35 (*SD* = 0. 989)

for their perceptions on behavioral intention, while the instructors who were 35 or

younger and 36 to 45 had mean scores of 3.76 (*SD* = 0.817), and 4.08 (*SD* = 1.051),

respectively. Bonferroni post hoc test indicated that the behavioral intention to use

bichronous online teaching in the group of instructors who were 46 or older were

more significant than the instructors 36 to 45, meaning that they may not prefer to

use bichronous online teaching as much as the other groups. Behavioral intention to

use bichronous online teaching in the group of instructors who were 35 or younger

(*M* = 3.44, *SD* = 0.496) did not differ significantly from either the instructors who

were 46 or older or 36 to 45.

When the mean scores of all the groups are analyzed, the instructors who

were 46 or older had lower mean scores with regard to their perceptions on

performance, effort, attitude toward using bichronous online teaching and behavioral

intention to use bichronous online teaching compared to other groups. Their lower

mean score on performance shows that they may not find bichronous online teaching

useful while the one for effort means that they might not find bichronous online

teaching easy to use. Their mean score for attitude toward using bichronous online teaching indicates that they may not want to use bichronous online teaching whereas the one for behavioral intention to use bichronous online teaching indicates that they might not prefer to use bichronous online teaching in the future if they have the decision-making power.

Perceptions on Bichronous Online Teaching Depending on Academic Qualification

Two separate independent samples t-tests and One-way ANOVA test were utilized to generate results for the second part of the research question that attempted to find differences in the perceptions of EFL instructors with differing academic qualification with regard to the constructs in the framework.

The first t-test was carried out to discover the perception differences, if any, between EFL instructors with Bachelor's and the ones with post Bachelor's degrees on performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety and behavioral intention to use bichronous online teaching. The results are presented below in Table 11.

Table 11

EFL Instructors' t-test Results: Differences between the Perceptions of Bachelor's and Post Bachelor's Degree Holders on Bichronous Online Teaching

Constructs	*Groups*[a]	*M*	*SD*	*t*	*df*	*p*	95% Confidence Interval of the Difference	
							Lower	*Upper*
P	1	3.89	0.860	0.655	131	.514	-0.216	0.431
	2	3.78	0.840					
E	1	4.00	0.644	0.288	131	.774	-0.237	0.319
	2	3.96	0.757					
ATUBOT	1	3.44	0.552	1.232	131	.220	-0.080	0.346
	2	3.31	0.558					

Table 11 (cont'd)

*EFL Instructors' t-test Results: Differences between the Perceptions of Bachelor's
and Post Bachelor's Degree Holders on Bichronous Online Teaching*

Constructs	*Groups*[a]	*M*	*SD*	*t*	*df*	*p*	95% Confidence Interval of the Difference	
							Lower	*Upper*
SI	1	3.81	0.643	0.570	131	.569	-0.156	0.283
	2	3.74	0.545					
FC	1	3.62	0.384	-0.719	131	.473	-0.208	0.097
	2	3.67	0.403					
SE	1	3.47	0.732	-1.202	131	.231	-0.391	0.095
	2	3.62	0.594					
A	1	1.94	0.695	-1.659	131	.099	-0.472	0.041
	2	2.16	0.661					
BITUBOT	1	3.83	1.172	0.315	131	.754	-0.335	0.463
	2	3.77	0.990					

[a] *Group 1: Bachelor's Degree Holders; Group 2: Post Bachelor's Degree Holders*

As can be seen in the table, for each construct, the mean scores of either group are relatively similar, and as the t-test results are not significant for any of them, this makes it impossible to talk about any difference in perception due to having only a Bachelor's or a post Bachelor's degree.

The second t-test was carried out to discover the perception differences of EFL instructors, if any, with Bachelor's and Master's degrees on performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety and behavioral intention to use bichronous online teaching (Table 12).

Table 12

EFL Instructors' t-test Results: Differences between the Perceptions of Bachelor's and Master's Degree Holders on Bichronous Online Teaching

Constructs	Groups[a]	M	SD	T	df	p	95% Confidence Interval of the Difference	
							Lower	*Upper*
P	1	3.89	0.860	0.940	123	.349	-0.169	0.476
	2	3.73	0.820					
E	1	4.00	0.644	0.521	123	.604	-0.210	0.359
	2	3.93	0.769					
ATUBOT	1	3.44	0.552	1.178	123	.241	-0.088	0.347
	2	3.31	0.565					
SI	1	3.81	0.643	0.435	123	.664	-0.175	0.274
	2	3.76	0.551					
FC	1	3.62	0.384	-0.654	123	.514	-0.208	0.104
	2	3.67	0.410					
SE	1	3.47	0.732	-1.562	123	.121	-0.432	0.050
	2	3.67	0.571					
A	1	1.94	0.695	-1.545	123	.125	-0.466	0.057
	2	2.15	0.667					
BITUBOT	1	3.83	1.172	0.353	123	.725	-0.334	0.480
	2	3.76	0.995					

[a] *Group 1: Bachelor's Degree Holders; Group 2: Master's Degree Holders*

As can be seen in the table, the mean scores of either group are similar for each of the constructs, and as the t-test results are not significant for any of them, this makes it impossible to talk about perceptional differences due to having a Bachelor's degree or a Master's degree.

One-way ANOVA test was utilized to identify the perceptions of instructors whose highest academic qualifications were from different departments regarding performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety and behavioral intention to

use bichronous online teaching. The means and standard deviations of eight

constructs in the one-way ANOVA test can be found in Table 13.

Table 13

Means and Standard Deviations for Perceptions of Instructors with Qualifications

from Different Departments on Bichronous Online Teaching

Dependent Variable	ELT		Language Related		Other	
	M	*SD*	*M*	*SD*	*M*	*SD*
P	3.78	0.88	3.94	0.81	3.68	0.76
E	3.98	0.78	4.04	0.63	3.81	0.68
ATUBOT	3.38	0.57	3.33	0.52	3.26	0.55
SI	3.82	0.54	3.75	0.55	3.59	0.66
FC	3.71	0.41	3.68	0.35	3.45	0.37
SE	3.52	0.66	3.66	0.65	3.63	0.51
A	2.08	0.77	2.18	0.58	1.98	0.49
BITUBOT	3.86	1.05	3.86	0.99	3.43	1.03

The highest mean scores can be observed for effort across all groups, and

instructors who held ELT degrees had a mean score of 3.98 while the instructors who

held language related degrees had a mean score of 4.04, which might indicate that

the instructors with other degrees might find bichronous online teaching harder to

use compared to the other groups. Based on the results, the lowest mean scores

among all groups can be seen for anxiety, and the mean score for instructors who

held ELT degrees was 2.08 while it was 1.98 for those who held other degrees,

meaning that the ones with other degrees might be more apprehensive to use

bichronous online teaching. The mean score of instructors who held ELT degrees for

facilitating conditions was 3.71 whereas it was 3.45 for the instructors who held

other degrees, indicating that they may not be as satisfied with the support system

provided. The mean and standard deviations for each question of each construct can be found in Appendix E.

Table 14 shows the results of the one-way ANOVA test conducted for perceptions of the instructors with degrees from different departments (ELT, language related, and other) regarding eight constructs.

Table 14

Means, Standard Deviations, and One-Way Analyses of Variance for Perceptions of Instructors with Qualifications from Different Departments on Bichronous Online Teaching

Dependent Variable	ELT		Language Related		Other		$F(2,130)$	η^2
	M	*SD*	*M*	*SD*	*M*	*SD*		
P	3.78	0.88	3.94	0.81	3.68	0.76	0.809	.012
E	3.98	0.78	4.04	0.63	3.81	0.68	0.780	.012
ATUBOT	3.38	0.57	3.33	0.52	3.26	0.55	0.450	.007
SI	3.82	0.54	3.75	0.55	3.59	0.66	1.442	.022
FC	3.71	0.41	3.68	0.35	3.45	0.37	3.910*	.057
SE	3.52	0.66	3.66	0.65	3.63	0.51	0.678	.010
A	2.08	0.77	2.18	0.58	1.98	0.49	0.675	.010
BITUBOT	3.86	1.05	3.86	0.99	3.43	1.03	1.657	.025

* p < .05

The results of the One-way ANOVA test indicated a significant difference among the groups only in terms of facilitating conditions ($F_{2,130}= 3.91$, $p = .022$, $\eta^2 = .06$) (Table 14).

Qualifications from different departments and facilitating conditions.
The results indicated a difference among the groups with respect to facilitating conditions ($F_{2,130}= 3.91$, $p = .022$, $\eta^2 = .06$) (Table 14). The effect size, measured using ŋ², was 0.06, revealing that academic qualifications had a medium effect on facilitating conditions. The Bonferroni correction post hoc test was run to determine

which groups differed from one another with respect to facilitating conditions in bichronous online teaching (Table 15).

Table 15

Multiple Comparisons Table for Facilitating Conditions (Bonferroni Correction Results)

Dependent Variable	Academic Qualification	Academic Qualification	Mean Difference	Standard Error	p
FC	ELT	Language Related	0.024	0.076	1.000
		Other	0.257	0.093	.021
	Language Related	ELT	-0.024	0.076	1.000
		Other	0.232	0.101	.071
	Other	ELT	-0.257	0.093	.021
		Language Related	-0.232	0.101	.071

Bonferroni post hoc test demonstrated that the mean score for the instructors who had degrees from other departments as their highest academic qualification ($M = 3.45$, $SD = 0.374$) was significantly different to the instructors who had ELT degrees as their latest degree ($M = 3.71$, $SD = 0.414$), which may indicate that they aren't familiar with the sources and information to use bichronous online teaching. The instructors who had language related degrees ($M = 3.68$, $SD = 0.352$) did not differ significantly from either the instructors who had degrees from other departments or who had ELT degrees as their highest academic qualification.

Perceptions on Bichronous Online Teaching Depending on Professional Qualification

One-way ANOVA and independent samples t-test were utilized to generate results for the third part of the research question that attempted to find differences in

the perceptions of EFL instructors with differing professional qualification, namely a
certificate (CELTA, ICELT or COTE), a diploma (DELTA), any other qualification
or no qualifications, with regard to the constructs in the framework.

To find out about the perceptions of instructors with different professional
qualifications regarding performance, effort, attitude toward using bichronous online
teaching, social influence, facilitating conditions, self-efficacy, anxiety and
behavioral intention to use bichronous online teaching, One-way ANOVA test was
performed. The means and standard deviations of eight constructs can be found in
Table 16.

Table 16

*Means and Standard Deviations for Perceptions of Instructors with Different
Professional Qualifications on Bichronous Online Teaching*

Dependent Variable	CELTA / ICELT / COTE		DELTA		Other		None	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
P	3.93	0.86	3.73	0.82	3.77	1.01	3.78	0.80
E	3.88	0.72	4.17	0.79	4.15	0.50	3.89	0.74
ATUBOT	3.46	0.59	3.38	0.47	3.18	0.66	3.30	0.52
SI	3.70	0.60	3.81	0.48	3.75	0.53	3.79	0.58
FC	3.56	0.38	3.80	0.35	3.69	0.42	3.65	0.42
SE	3.67	0.59	3.61	0.67	3.41	0.56	3.57	0.67
A	2.08	0.61	1.95	0.65	1.79	0.59	2.27	0.70
BITUBOT	4.08	0.93	3.95	0.98	3.53	1.35	3.61	0.97

The results suggested that one of the highest mean scores was observed for
effort, and the mean score of the instructors with no certificates was 3.89 while the
instructors who held DELTA and other certificates had mean scores of 4.17 and 4.15,
respectively. Based on the results, the lowest mean scores across all groups can be

seen for anxiety, and the mean score of instructors who held other certificates was 1.79 while it was 2.27 for the instructors with no certificates. While the mean score of the instructors who held other certificates for behavioral intention to use bichronous online teaching was 3.53, the one for the instructors with CELTA/ICELT/COTE was 4.08. The mean and standard deviations for each question of each construct can be found in Appendix F.

Table 17 below shows the results of the one-way ANOVA test conducted for perceptions of the instructors with different professional qualifications (i.e., CELTA/ICELT/COTE, DELTA, other, and none) regarding performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety and behavioral intention to use bichronous online teaching.

Table 17

Means, Standard Deviations, and One-Way Analyses of Variance for Perceptions of Instructors with Different Professional Qualifications on Bichronous Online Teaching

Dependent Variable	CELTA / ICELT / COTE		DELTA		Other		None		$F(3,129)$	η^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
P	3.93	0.86	3.73	0.82	3.77	1.01	3.78	0.80	0.348	.008
E	3.88	0.72	4.17	0.79	4.15	0.50	3.89	0.74	1.412	.032
ATUBOT	3.46	0.59	3.38	0.47	3.18	0.66	3.30	0.52	1.173	.027
SI	3.70	0.6	3.81	0.48	3.75	0.53	3.79	0.58	0.240	.006
FC	3.56	0.38	3.80	0.35	3.69	0.42	3.65	0.42	1.725	.039
SE	3.67	0.59	3.61	0.67	3.41	0.56	3.57	0.67	0.671	.015
A	2.08	0.61	1.95	0.65	1.79	0.59	2.27	0.70	3.001*	.065
BITUBOT	4.08	0.93	3.95	0.98	3.53	1.35	3.61	0.97	2.107	.047

*$p < .05$

The results indicated a difference among the groups only with respect to anxiety ($F_{3,129} = 3.00$, $p = .033$, $\eta^2 = .07$). The effect size, measured using ŋ², was 0.07, revealing that professional qualifications had a medium effect on anxiety. The Bonferroni correction post hoc test was run to determine which groups differed from one another with respect to their anxiety in bichronous online teaching (Table 18). Bonferroni correction was chosen for the multiple comparisons as the sample sizes of the groups were not equal.

Table 18

Multiple Comparisons Table for Anxiety (Bonferroni Correction Results)

Dependent Variable	Professional Qualification	Professional Qualification	Mean Difference	Standard Error	*p*
A	CELTA / ICELT / COTE	DELTA	0.125	0.174	1.000
		Other Certificates	0.291	0.190	.772
		None	-0.193	0.141	1.000
	DELTA	CELTA / ICELT / COTE	-0.125	0.174	1.000
		Other Certificates	0.166	0.206	1.000
		None	-0.318	0.161	.304
	Other Certificates	CELTA / ICELT / COTE	-0.291	0.190	.772
		DELTA	-0.166	0.206	1.000
		None	-0.485	0.179	.046
	None	CELTA / ICELT / COTE	0.193	0.141	1.000
		DELTA	0.318	0.161	.304
		Other Certificates	0.485	0.179	.046

As the Bonferroni post hoc test demonstrated that the mean score for the instructors who held other certificates as a professional qualification ($M = 1.79$, $SD = 0.596$) was significantly different from the instructors who held no certificates as professional qualifications ($M = 2.27$, $SD = 0.708$), this meant that the ones with other certificates may not be anxious when conducting bichronous online teaching.

The instructors who held CELTA/ICELT/COTE (M = 2.08, SD = 0.618) and the instructors who held DELTA (M = 1.96, SD = 0.653) did not differ significantly from either the instructors who held other certificates or no certificates as a professional qualification.

To determine if there were any differences among the EFL instructors who have no certificates and other types of certificates with regard to their perceptions on performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety and behavioral intention to use bichronous online teaching, independent samples t-test was used. The results are presented in Table 19.

Table 19

EFL Instructors' t-test Results: Differences between the Perceptions of some sort of and no Professional Certificate Holders on Bichronous Online Teaching

Constructs	Groups[a]	M	SD	t	df	p	95% Confidence Interval of the Difference	
							Lower	*Upper*
P	1	3.83	0.882	0.404	131	.687	-0.234	0.354
	2	3.77	0.794					
E	1	4.03	0.715	1.026	131	.307	-0.121	0.382
	2	3.90	0.738					
ATUBOT	1	3.37	0.584	0.771	131	.442	-0.118	0.269
	2	3.30	0.521					
SI	1	3.73	0.566	-0.660	131	.510	-0.266	0.132
	2	3.80	0.585					
FC	1	3.66	0.394	0.243	131	.808	-0.121	0.155
	2	3.65	0.406					
SE	1	3.60	0.616	0.300	131	.764	-0.188	0.255
	2	3.56	0.668					
A	1	1.99	0.620	-2.261	131	.025	-0.495	-0.033
	2	2.25	0.722					

Table 19 (cont'd)

EFL Instructors' t-test Results: Differences between the Perceptions of some sort of and no Professional Certificate Holders on Bichronous Online Teaching

Constructs	Groups[a]	*M*	*SD*	*t*	*df*	*p*	95% Confidence Interval of the Difference	
							Lower	*Upper*
BITUBOT	1	3.90	1.069	1.473	131	.143	-0.091	0.627
	2	3.63	0.987					

[a] *Group 1: Some sort of professional certificate holders; Group 2: No professional certificate holders*

As can be seen in the table, the mean scores of either group are similar for performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, self-efficacy and behavioral intention to use bichronous online teaching, and since the t-test results are not significant for any of them, it is not possible to talk about any kind of a perception difference due to having some sort of professional certificates and no professional certificates. However, the t-test results are significant for anxiety.

Anxiety. There was a difference between the two groups (t(131) = -2.261, p = .025) . While the instructors with some sort of certificates had a mean score of 1.99 (SD = 0.620), the mean score for the ones with no certificates was 2.25 (SD = 0.722) (Table 19). The effect size (Cohen's d) was 0.39, meaning whether the instructors had certificates or not had a small effect.

Perceptions on Bichronous Online Teaching Depending on Years of Experience in the Profession

An independent samples t-test was utilized to generate results for the fourth part of the research question that attempted to find differences in the perceptions of

EFL instructors with differing years of experience in the profession with regard to the constructs in the framework. The results are presented below in Table 20.

Table 20

EFL Instructors' t-test Results: Differences between the Perceptions of those with less and more than 20 Years of Experience in the Profession on Bichronous Online Teaching

Constructs	Groups[a]	*M*	*SD*	*t*	*Df*	*p*	95% Confidence Interval of the Difference	
							Lower	*Upper*
P	1	3.94	0.739	2.142	131	.034	0.023	0.604
	2	3.63	0.950					
E	1	4.18	0.597	4.261	131	<.001	0.274	0.749
	2	3.67	0.787					
ATUBOT	1	3.43	0.494	2.190	99,278	.031	0.020	0.419
	2	3.21	0.619					
SI	1	3.83	0.530	1.569	131	.119	-0.041	0.355
	2	3.67	0.621					
FC	1	3.67	0.373	0.503	131	.615	-0.103	0.174
	2	3.64	0.432					
SE	1	3.64	0.666	1.319	131	.190	-0.073	0.368
	2	3.50	0.587					
A	1	2.05	0.559	-0.836	89,059	.405	-0.357	0.145
	2	2.16	0.813					
BITUBOT	1	3.97	0.950	2.387	104,342	.019	0.074	0.807
	2	3.53	1.114					

[a] *Group 1: Instructors with less than 20 years of experience in the profession; Group 2: Instructors with 20 or more years of experience in the profession*

As can be seen in the table, the mean scores of either group are similar for social influence, facilitating conditions, self-efficacy and anxiety, and as the t-test results are not significant for any of them, it is hard to talk about perceptional differences due to having both less, or more, than 20 years of experience in the

profession. However, the t-test results are significant for performance, effort, attitude toward using bichronous online teaching, and behavioral intention to use bichronous online teaching.

Performance. There was a difference between the two groups (t(131) = 2.142, p = .034). While the mean score of instructors with less than 20 years of experience in the profession was 3.94 (SD = 0.739), the one for instructors with 20 or more years of experience in the profession was 3.63 (SD = 0.950) (Table 20). The effect size was 0.36, meaning whether the instructors had less or more than 20 years of experience had a small effect.

Effort. There was a difference between the two groups (t(131) = 4.261, p = .001). As shown in Table 20, even though the mean score of the instructors with less than 20 years of experience in the profession was 4.18 (SD = 0.597), those who had 20 or more had a lower mean score (M = 3.67, SD = 0.787). The effect size was 0.73, pointing out that their experience had a moderate effect on effort.

Attitude toward using bichronous online teaching. There was a difference between the two groups with regard to attitude toward using bichronous online teaching (t(99.278) = 2.190, p = .031). While the instructors with had less than 20 years of experience in the profession had a higher mean score (M = 3.43, SD = 0.494), the ones with 20 or more had a mean score of 3.21 (SD = 0.619) (Table 20). The effect size was 0.39, showing experience had a small effect on attitude.

Behavioral intention to use bichronous online teaching. A difference was observed between the two groups (t(104.342) = 2.387, p = .019). As shown in Table 20, the mean score of instructors with less than 20 years of experience in the profession was 3.97 (SD = 0.950) while the one for instructors who had 20 or more

years of experience in the profession was lower (M = 3.53, SD = 1.114). The effect

size was 0.42, meaning experience had a small effect on behavioral intention.

Perceptions on Bichronous Online Teaching Depending on Perceived

Competence in the Use of Educational Technologies

An independent samples t-test was utilized to generate results for the fifth

part of the research question that attempted to find differences in the perceptions of

EFL instructors with differing perceived competence in the use of educational

technologies with regard to the constructs in the framework. The results are

presented below in Table 21.

Table 21

EFL Instructors' t-test Results: Differences between the Perceptions of those with

Different Perceived Competence in the Use of Educational Technologies on

Bichronous Online Teaching

Constructs	*Groups*[a]	*M*	*SD*	*t*	*df*	*p*	95% Confidence Interval of the Difference	
							Lower	*Upper*
P	1	4.31	0.657	3.946	131	<.001	0.323	0.973
	2	3.66	0.835					
E	1	4.60	0.464	6.241	131	<.001	0.558	1.077
	2	3.78	0.682					
ATUBOT	1	3.59	0.530	2.881	131	.005	0.100	0.541
	2	3.27	0.547					
SI	1	3.94	0.550	2.003	131	.047	0.002	0.462
	2	3.71	0.571					
FC	1	3.84	0.406	3.049	131	.003	0.084	0.397
	2	3.60	0.379					
SE	1	3.65	0.754	0.665	131	.507	-0.171	0.345
	2	3.56	0.599					
A	1	1.74	0.634	-3.527	131	<.001	-0.731	-0.205
	2	2.21	0.652					

Table 21 (cont'd)

EFL Instructors' t-test Results: Differences between the Perceptions of those with Different Perceived Competence in the Use of Educational Technologies on Bichronous Online Teaching

Constructs	Groups[a]	M	SD	t	df	p	95% Confidence Interval of the Difference	
							Lower	*Upper*
BITUBOT	1	4.27	0.699	3.848	77,415	<.001	0.306	0.964
	2	3.64	1.083					

[a] *Group 1: Instructors who perceived themselves very competent in the use of educational technologies; Group 2: Instructors who perceived themselves as competent and somewhat competent in the use of educational technologies*

As can be seen in the table, the mean scores of either group are not much different from each other for self-efficacy, and since the t-test results are not significant for any of them, it is not possible to talk about any kind of a perception difference due to perceiving themselves very competent and competent or somewhat competent in the use of educational technologies for self-efficacy. However, the t-test results are significant for performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, anxiety, and behavioral intention to use bichronous online teaching.

Performance. There was a difference between two groups (t(131) = 3.946, p = .001). While the instructors who perceived themselves very competent in the use of educational technologies had a mean score of 4.31 (SD = 0.671), the ones who perceived themselves as competent and somewhat competent in the use of educational technologies had a mean score of 3.66 (SD = 0.835) (Table 21). The effect size of 0.85 pointed out that whether the instructors perceived themselves as

very competent or competent and somewhat competent in the use of educational technologies had a large impact on performance.

Effort. A difference was observed between two groups (t(131) = 6.241, p = .001). As shown in Table 21, the instructors who perceived themselves very competent had a mean score of 4.60 (SD = 0.464). In contrast, those who perceived themselves as competent and somewhat competent had a lower mean score (M = 3.78, SD = 0.682). The effect size was 1.40, indicating whether the instructors perceived themselves as very competent or competent and somewhat competent had a very high impact on effort.

Attitude toward using bichronous online teaching. A difference was noticed between two groups (t(131) = 2.881, p = .005). While the instructors who perceived themselves very competent had a mean score of 3.59 (SD = 0.530), the ones who perceived themselves as competent and somewhat competent had a mean score of 3.27 (SD = 0.547) with regard to their attitude toward using bichronous online teaching (Table 21). The effect size of 0.59 pointed out whether the instructors perceived themselves as very competent or competent and somewhat competent impacted attitude moderately.

Social influence. A difference was observed between two groups (t(131) = 2.003, p = .047). As shown in Table 21, the mean score of the instructors who perceived themselves very competent was 3.94 (SD = 0.550). By contrast, a lower mean score was noticed for the ones who perceived themselves as competent and somewhat competent (M = 3.71, SD = 0.571). The effect size was 0.41, indicating whether the instructors perceived themselves as very competent or competent and somewhat competent had a small effect.

Facilitating conditions. There was a difference between two groups (t(131) = 3.049, p = .003). While the instructors who perceived themselves very competent had a mean score of 3.84 (SD = 0.406), the ones who perceived themselves as competent and somewhat competent had a mean score of 3.60 (SD = 0.379) (Table 21). The effect size of 0.61 meant that whether the instructors perceived themselves as very competent or competent and somewhat competent moderately affected facilitating conditions.

Anxiety. A difference was noticed between two groups (t(131) = -3.527, p = .001). The instructors who perceived themselves very competent had a mean score of 1.74 (SD = 0.634) whereas the ones who perceived themselves as competent and somewhat competent had a higher mean score (M= 2.21, SD = 0.652) in terms of anxiety (see Table 21). The effect size was 0.72, indicating whether the instructors perceived themselves as very competent or competent and somewhat competent highly affected anxiety.

Behavioral intention to use bichronous online teaching. There was a difference between two groups (t(77.415) = 3.848, p = .001). As shown in Table 21, the instructors who perceived themselves very competent had a higher mean score (M= 4.27, SD = 0.699) while those who perceived themselves as competent and somewhat competent had a lower mean score (M = 3.64, SD = 1.083). The effect size of 0.69 indicated whether the instructors perceived themselves as very competent or competent and somewhat competent highly affects behavioral intention.

The results suggest that there were some differences in the perceptions of instructors on the use of bichronous online teaching depending on their ages, academic qualifications, professional qualifications, years of experience in the

profession and perceived competence in the use of educational technologies which are presented in Table 22.

Table 22

Summary of the Significant Findings

Variable	Constructs with Significance
Age	Performance
	Effort
	Attitude toward Using Bichronous Online Teaching
	Behavioral Intention to Use Bichronous Online Teaching
Academic Qualifications	Facilitating Conditions
Professional Qualifications	Anxiety
Years of Experience in the Profession	Performance
	Effort
	Attitude toward Using Bichronous Online Teaching
	Behavioral Intention to Use Bichronous Online Teaching
Perceived Competence in the Use of Educational Technologies	Performance
	Effort
	Attitude toward Using Bichronous Online Teaching
	Social Influence
	Facilitating Conditions
	Anxiety
	Behavioral Intention to Use Bichronous Online Teaching

As for the first part of the research question, the findings indicated that the instructors who were 46 or older had lower means compared to the ones who were 35 or older, and 36 to 45 in terms of performance, effort, attitude toward using bichronous online teaching and behavioral intention to use bichronous online teaching.

The results for the second part of the research question indicated no significant differences between the instructors who held Bachelor's and Post Bachelor's degrees, and Bachelor's and Master's degrees with respect to any of the constructs. However, a significant difference was noticed with regard to facilitating conditions as the instructors who held degrees from other departments had the lowest mean when compared with the instructors who held ELT or Language related degrees.

The findings of the third part of the research question indicated that the instructors who held other certificates had the lowest mean compared to the ones who held CELTA/ICELT/COTE, DELTA or no certificates in terms of anxiety. The comparison between the instructors with some sort of certificates and no certificates revealed that the ones with some sort of certificates had a lower mean in terms of anxiety.

As for the fourth part of the research question, the findings indicated that the instructors with 20 or more years of experience in the profession had lower mean scores in terms of performance, effort, attitude toward using bichronous online teaching and behavioral intention to use bichronous online teaching than the ones with less than 20 years of experience in the profession.

The results of the last part of the research question revealed that the instructors who perceived themselves to be competent or somewhat competent in the

use of educational technologies had lower mean scores than the ones who perceived themselves very competent in terms of performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions and behavioral intention to use bichronous online teaching while the instructors who considered themselves to be very competent in the use of educational technologies had a lower mean score in terms of anxiety than the instructors who perceived themselves to be competent or somewhat competent

Conclusion

In this study, the researcher existence of any differences between EFL instructors' groups on the basis of their age, academic qualification, professional qualification, years of experience in the profession, and perceived competence in the use of educational technologies with regard to their perceptions in using bichronous online teaching. In this chapter, the findings of the data attained from an online questionnaire were provided. The discussion and conclusion of the findings, their implications for practice and further research, and limitations of the study will be provided in the following chapter.

CHAPTER 5: CONCLUSION

Introduction

In this chapter, first, the major findings with regard to the perceptions of EFL instructors regarding bichronous online teaching within the framework of Venkatesh et al. (2003) are discussed with reference to relevant literature. Next, the implications for practice and further research are covered. Finally, limitations of the study are presented.

Discussion of the Main Findings

Although there is little evidence of a similar research study specifically about bichronous teaching, there are some studies related to online teaching, synchronous teaching, and asynchronous teaching. Thus, some links, resemblances, and contrasts among the findings of these studies and this current study can be mentioned only for the discussion. Some assumptions have been made regarding the perceptions of EFL instructors towards bichronous online teaching on the basis of the findings.

The current study intended to identify differences, if any, in the perceptions of EFL instructors towards bichronous online teaching depending on certain variables, and some significant results have been found for some of the constructs. Significant differences were found in terms of performance, effort, attitude toward using bichronous online teaching, and behavioral intention to use bichronous online teaching between the groups regarding their ages and years of experience in the profession. The only significant difference that was found for academic qualifications was in terms of facilitating conditions while the one for professional qualifications was anxiety. The significant differences found for perceived

competence in the use of educational technologies were in terms of performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, anxiety and behavioral intention to use bichronous online teaching.

Perceptions on Bichronous Online Teaching Depending on Age

Regarding age, differences were observed among the groups with regard to their perceptions on performance, effort, attitude toward using bichronous online teaching, and behavioral intention to use bichronous online teaching.

The results showed that the instructors who were 46 or older had lower mean scores with regard to their perceptions on performance which suggested that they may not find bichronous online teaching to be as useful as the instructors in the other groups. The low mean scores of the same group in terms of effort might mean that using bichronous online teaching may not be as easy for them compared to the other groups. Their low mean scores for attitude toward using bichronous online teaching indicated that they appear to be unwilling to use bichronous online teaching, and their mean score for behavioral intention to use bichronous online teaching suggested that when given the choice, they might not prefer using it.

The perceptions of the instructors who were 46 or older might have been affected by their ability, knowledge and experience, and technology related or course quality related concerns, similar to the findings of Peng (2010) who found that the ability of the instructors, their knowledge and experience, and concerns were possibly hindered by the implementation of online ESL courses. The instructors who were 46 or older might not have been eager to use bichronous online teaching as most probably did not care about the availability of resources as they did not feel self-confident or willing to utilize it.

The top-down pressure and the school's implementation of bichronous online teaching might have affected the perceptions of these instructors quite negatively. However, Peng (2010) found that some factors such as availability of resources, the implementation of the online technology of the school and top-down pressure were found to foster the implementation of online ESL course, which contradict the results of this study to some extent.

The instructors who were 46 or older had the lowest mean scores compared to those 35 or younger and 36 – 45 in terms of performance, effort, attitude toward using bichronous online teaching, and behavioral intention to use bichronous online teaching. The reason might be that the instructors who were 46 or older may not have received much education on how to use technology and technological tools in their years of education, so they may lack the technological knowledge for its use. Another reason might be that these instructors might believe that the other teaching methods they have been using so far have been more beneficial in their teaching, meaning that they might feel that bichronous online teaching is not useful, and they may not intend to use it in the future. One other reason for these instructors' feeling of unease and willingness to use bichronous online teaching might be that they did not select this method of teaching personally, but because it was forced on them due to the pandemic, which might lead to their reluctance. These instructors might also feel that using bichronous online teaching requires a lot of effort, and they might feel that the time they will spend using it is not worth it, or they might have technophobia which makes them reluctant to use it. Another reason could be that their ability to adapt to changes, especially regarding technology, decreases with age, and it might have made these instructors feel hesitant.

Perceptions on Bichronous Online Teaching Depending on Academic Qualification

The second part of the research question aimed to determine existence of any differences among groups of EFL instructors who held differing academic qualifications with regard to their perceptions on performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, self-efficacy, anxiety and behavioral intention to use bichronous online teaching.

This study concludes that having only a Bachelor's degrees and post Bachelor's degree does not make any significant differences in the perceptions of the instructors. Nonetheless, the ones with post Bachelor's degrees had higher mean scores for facilitating conditions, self-efficacy, and anxiety. The findings confirm what Alqadoumi (2012) stated by saying these instructors might be of the opinion that even if they are experienced and knowledgeable in the use of technology, some external problems related to the internet, the computer, the websites or software/applications might occur while they are trying to teach.

The reason for them to have higher scores for facilitating conditions, and self-efficacy could be that these instructors might have more knowledge or experience regarding technology use in their classes while teaching EFL, and they might believe bichronous online teaching to be as useful as the other, perhaps more traditional, methods of teaching they use in their practices.

Being more positive towards technology use, having the ability and knowledge about it, and finding it easy to use might have made the instructors with post Bachelor's degrees to have higher mean scores for self-efficacy and facilitating conditions. Furthermore, the instructors with Bachelor's degrees might have had higher mean scores for performance, effort, attitude toward using bichronous online

teaching, social influence, and behavioral intention to use bichronous online teaching as they might have been more positive towards its use. The results from Peng's (2010) study supports these findings by demonstrating that having available resources, and a positive attitude towards using online technology foster the implementation of online ESL courses.

The results of the second test conducted demonstrated no difference between Bachelor's and Master's degree holders. Nevertheless, the instructors with Bachelor's degrees had higher mean scores for performance, effort, attitude toward using bichronous online teaching, social influence, and behavioral intention to use bichronous online teaching, which contradicts with what Peng stated in terms of having resources and being more knowledgeable. One of the reasons might be that the instructors who are in this group are younger, meaning that they are members of generation Y and that they have been using technology a lot, hence they are very comfortable incorporating it in their teaching as they find it effortless to employ, which supports Peng's idea of having a more positive attitude. If they were younger, as mentioned earlier, it could be said that they would be more open to being influenced by colleagues or administrators to aid their facilitation of bichronous online teaching.

The results of the last test conducted showed a difference among the groups of instructors who have degrees from different departments in terms of their perceptions on facilitating conditions.

The instructors who have received their highest academic degree from other departments might not have felt confident in their knowledge about the area and technology as well, leading them to feel that they do not have the facilitating conditions to use bichronous online teaching. The findings of Harvil (2018), Kentera

(2016), and Peng (2010) also support the finding of this study as they stated that the confidence levels of the instructors affect their attitude toward the use of the online education systems, methods or tools.

This study concludes that the instructors who have received their highest academic degree from other departments (not ELT or Language related) had the lowest mean score for facilitating conditions. This might be because these instructors might not feel comfortable enough to use some of the tools required to be used in bichronous online teaching as they may perceive them as difficult to perform the required additional workload since they may not have received education on how to incorporate technology in their classroom. Another reason could be that they do not feel competent in language teaching already in traditional education, and bichronous online teaching could create more difficulties as it requires learning new skills and making use of them in class. One other reason could be that as they already lack ELT knowledge, they may not be sure if they have the necessary knowledge to use bichronous online teaching, or they might not be aware of the assistance provided by the school or willing to use it, with the fear of others perceiving them as inexperienced or incompetent.

Perceptions on Bichronous Online Teaching Depending on Professional Qualification

Regarding the professional qualifications, the results of the first test conducted indicated a difference among the groups (instructors who had CELTA/ICELT/COTE, DELTA, other teaching certificates, and no certificates) in terms of their perceptions on anxiety.

The 20 instructors who held other certificates had the lowest mean score. This result might have emerged due to the fact that these instructors might not have gone

through any strict and professional trainings as CELTA, ICELT, COTE, or DELTA and have not been observed by trainers in their classes; they might be feeling more comfortable in using bichronous online teaching as they would not have experiences of being monitored or screened, which is believed to be one of the drawbacks of online tools or methods for teaching. Harvil (2018) and Kentera (2016)'s studies also support the findings as they indicated that the attitude of the instructors and their confidence levels positively affect the perceptions of the teachers towards using online tools and methods in their practices, which might have been the case for the instructors in this study.

The findings for the teachers' perceptions regarding bichronous online teaching related to anxiety in the current study can also be supported by Harvil (2018) and Kentera (2016)'s findings for the teachers' having positive attitudes and being confident.

The results of the second test conducted demonstrated a difference between the 74 instructors who held some sort of certificates and 55 who held no certificates, in terms of anxiety. The results indicated that the instructors who had some sort of certificate had a lower mean score. This might be explained by them being more comfortable in the use of bichronous online teaching because of being more knowledgeable and experienced regarding technology use in classes and finding it easy to use due to the trainings they have received. Another reason could be that as they feel self-confident in the use of bichronous online teaching, they may not really worry about any problems they might encounter along the way knowing that they can overcome any of them with ease.

Even though there are no differences for the other constructs between the groups in the current study, there are differences in their mean scores. The instructors

with some sort of certificate have higher means for performance, effort, attitude toward using bichronous online teaching, facilitating conditions, self-efficacy and behavioral intention. The reasons behind all these could be, as already mentioned, being knowledgeable, having resources and experience, being self-confident and being motivated to use bichronous online teaching. As for the instructors with no certificates, the mean of social influence was higher. Peng (2010)'s findings of availability of resources, and having knowledge and experience also support the idea of fostering implementation of online ESL courses, which might have led the instructors with some sort of certificate to feel eager and comfortable using bichronous online teaching. This might be explained by them being inexperienced or lacking knowledge about use of technology in their practices, which might lead them to be affected by the people who have power over them such as colleagues or administrators.

Perceptions on Bichronous Online Teaching Depending on Years of Experience in the Profession

Regarding the instructors' years of experience in the profession, differences were observed among the groups with regard to their perceptions on performance, effort, attitude toward using bichronous online teaching, and behavioral intention to use bichronous online teaching.

The instructors who had 20 or more years of experience in the profession had lower mean scores for performance, effort, attitude toward using bichronous online teaching, and behavioral intention to use bichronous online teaching. The reason behind these findings could be very much related to age. As these instructors are at least in their forties it can be said that they may not have received a great deal of training in their education related to technology, as it is a relatively new concept,

especially with regard to its use for bichronous online teaching. Not being able to adapt to situations and being open to change might also result in these instructors lacking willingness to use the method. Another reason could be not having the option to adopt this method of teaching, but being forced to use it. They might also believe that this method of teaching is not as useful as the methods they have been employing in their practices so far. Lastly, having technophobia might lead these instructors lack of eagerness to implement bichronous online teaching, believing that they may not succeed in using it or they might encounter several problems in doing so. All the reasons mentioned also explain why the instructors with less than 20 years of experience have higher mean scores for performance, effort, attitude toward using bichronous online teaching, facilitating conditions, self-efficacy and behavioral intention to use bichronous online teaching.

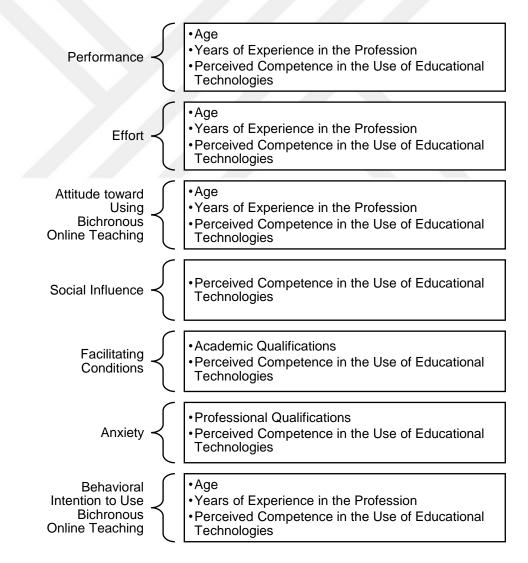The perceptions and findings of instructors who were 46 or older are very similar to the ones for instructors with 20 or more years of experience in the profession. The instructors with 20 or more years might have thought lacking ability, knowledge and experience (and other concerns) may have led them to refrain from using bichronous online teaching, which was also supported by the findings of Peng (2010). The differences of both studies have also been mentioned in the same section of this chapter. While having available resources did not positively affect the attitudes of the instructors with 20 or more years of experience in the current study, it did affect the instructors in Peng (2010)'s study.

As for social influence, the higher mean score of the instructors with less than 20 years of experience could be explained by them being more willing to show to their superiors that they are keeping up with the changes happening around them;

perhaps they want to be accepted and appreciated, and they see the efforts of the institution helping them in the process which is new to everyone in the institution.

Perceptions on Bichronous Online Teaching Depending on Perceived Competence in the Use of Educational Technologies

Regarding the perceived competence of the instructors in the use of educational technologies, differences were observed among the groups with regard to their perceptions on performance, effort, attitude toward using bichronous online teaching, social influence, facilitating conditions, anxiety, and behavioral intention to use bichronous online teaching.

One of the reasons might be that, as these instructors had already had the knowledge, training, experience, and resources to use bichronous online teaching in their teaching practice, they might have perceived themselves as very competent. They might have also believed that it was useful and fun to teach EFL with this system since they were self-confident about their competence in using the method. They might also have been more willing to use bichronous online teaching in the future because of their self-confidence and its ease of use for them. Another reason could have been that these instructors had to adopt bichronous online teaching due to the pandemic, and had been using it for more than a year when the data were gathered, which might mean that they had already become very competent in the process. The perceptions of the instructors who believed themselves to be very competent, and willing and eager to use bichronous online teaching support the findings of Harvil (2018) and Kentera (2016) as they had also highlighted that confidence levels and attitudes of their participants had strong effects on their perceptions regarding the online tool or methods.

Summary of Conclusions

As presented earlier in this chapter, some differences have been observed in the perceptions of the instructors who took part in the study. Significant differences of the participants on bichronous online teaching for the constructs in the framework used are presented in Figure 2 for the variables of the study – age, academic qualifications, professional qualifications, years of experience in the profession, and perceived competence in the use of educational technologies.

Figure 2

Summary of Study Conclusions

Performance	• Age • Years of Experience in the Profession • Perceived Competence in the Use of Educational Technologies
Effort	• Age • Years of Experience in the Profession • Perceived Competence in the Use of Educational Technologies
Attitude toward Using Bichronous Online Teaching	• Age • Years of Experience in the Profession • Perceived Competence in the Use of Educational Technologies
Social Influence	• Perceived Competence in the Use of Educational Technologies
Facilitating Conditions	• Academic Qualifications • Perceived Competence in the Use of Educational Technologies
Anxiety	• Professional Qualifications • Perceived Competence in the Use of Educational Technologies
Behavioral Intention to Use Bichronous Online Teaching	• Age • Years of Experience in the Profession • Perceived Competence in the Use of Educational Technologies

As can be seen, perceived competence in the use of educational technologies has an effect on all of the constructs. On the other hand, academic qualifications have

an impact on only one construct: facilitating conditions, age, years of experience in the profession and perceived competence in the use of educational technologies which all together have an impact on 5 out of 8 constructs, excluding social influence, facilitating conditions, and anxiety.

Implications for Practice

The findings of this study point out crucial educational implications for implementation, particularly for directors and teacher trainers. The instructors should be supported to feel more competent than they are in the use of bichronous online teaching. This can be done by providing the opportunity to obtain further academic and professional qualifications, or holding workshops, seminar, or trainings in the institution so that they can feel more confident with all the knowledge they have gained. The institutions can also do this by providing a better or more improved support system when teachers need help, notifying them of this service and encouraging them to utilize it without any concerns. The instructors should also be supported individually by their co-workers in order for them be motivated in a way that does not feel intimidating and forced, so they can feel that their colleagues can also provide support. Another suggestion can be that there can be an online community for them to share their experiences and knowledge to make the process easier for everyone and to make them feel more comfortable in their teaching practices. Knowing that their colleagues also experience problems could hopefully make them feel less anxious. Being aware of the fact that there is a chance for everyone to support each other with their existing knowledge or that something they learn along the way would also have the same effect by helping them feel relaxed but also satisfied, and even proud. The final suggestion could be for the institutions to explain to the instructors why they are making use of bichronous online teaching and

the advantages and disadvantages of using it which can be followed by clarifying how those tools can be used. Furthermore, the advantages and disadvantages of using bichronous online teaching could be outlined more clearly in order for the instructors to understand the whole process and be more willing to adopt its use. This should be done as having knowledge about the expectations, benefits and downsides, and how to approach the use of a certain method/material/system would provide clarity about what to expect and increase comfort and confidence in the system's use and implementation.

Implications for Further Research

The findings of the current study can lead to various recommendations for further research. One suggestion can be that an experimental study can be conducted. Some of the instructors in the institution where this study was conducted do not have post graduate degrees, and some do not have any professional qualifications. After getting the instructors to fill in the questionnaire, they can be offered a chance to obtain some further academic or professional qualifications. Upon the completion of their trainings, they can be asked to fill in the questionnaire again to see if there are any changes in their perceptions. A mixed methods design can be used to get more profound information on the perceptions of the instructors on bichronous online teaching by conducting semi-structured interviews with a focus group or adding open-ended questions to the survey. Interview questions can be prepared in a way to elicit the teachers' thoughts and feelings with more details and by giving reasons and explanations, which might shed a better light on the reasons behind their perceptions. Another suggestion can be conducting a similar study at a number of universities to be able to obtain more generalizable results. One other suggestion could be having a greater number of participants for the sample size in order to better analyze

differences between genders in terms of their perceptions on bichronous online teaching. A similar study can also be conducted with students in order to compare and contrast the findings of a study with teacher perceptions, which might give a more comprehensive idea on the use of bichronous online teaching that is to the benefit of all the stakeholders in the educational process. The last suggestion might be carrying out a longitudinal study to see if the teachers could develop a more positive attitude towards bichronous online teaching as they tend to do so based on the literature.

Limitations of the Study

One limitation of this study was that it was conducted with a limited number of instructors teaching at a public university in Turkey. The instructors that were involved in this study were low in number, and they did not reflect the perceptions of all the instructors in that specific institution. Moreover, the number of instructors that participated in this study, and conducting the study at only one state university's preparatory school might not have reflected the EFL teachers' perceptions who work at foundation universities and other state ones in Turkey.

Another limitation could possibly be related to the design. This quantitative study utilized a questionnaire with 5-point Likert Scale items to obtain information regarding the perceptions of the participants. The use of semi-structured interviews with a focus group or open-ended questions in the questionnaire could have obtained more in-depth information about their perspectives on bichronous online teaching, facilitating a deeper understanding of the reasons behind the feelings and beliefs of the instructors. Conducting semi-structured interviews would also help with the triangulation of the data.

A third limitation could be not being able to incorporate gender as a variable. Gender is considered to be a moderator variable in the "UTAUT model" by Venkatesh et al. (2003); however, as the number of males who participated in the study was insufficient, as at least 30 participants are needed in the sample (Dörnyei and Taguchi, 2010), the researcher was not able to look at the perception differences of different genders.

Conclusion

This study examined the EFL instructors' perceptions on bichronous online teaching. It aimed to examine the perceptions of the EFL instructors with regard to their age, academic qualification, professional qualification, years of experience in the profession, and perceived competence in the use of educational technologies. There were some differences in the perceptions of the instructors when compared to other groups even if there was not a big difference between the mean scores of the same construct among them. The results revealed that even if most of the groups were in general in favor of the constructs in the model used, the perceptions of the teachers differed for some constructs with regard to their age, academic qualification, professional qualification, years of experience in the profession and perceived competence in the use of educational technologies. The instructors who are younger, who have been teaching less than 20 years, who have professional qualifications and perceive themselves as very competent in the use of educational technologies are more willing to use bichronous online teaching. The finding of age and years of experience are almost identical in that they both indicated the older instructors did not feel comfortable in using bichronous online teaching, they found it difficult to use and not very useful for teaching related tasks, and they do not plan on using it if they are given the decision-making power.

Even though there isn't enough data to support the findings of this study in the literature, it can be said that more knowledge, training and experience with the use of technology in their teaching practices affects the teachers' perceptions on the use of bichronous online teaching positively.

REFERENCES

Abarquez, A. (2021). Lens of language and literature programs in the new norm educational setting amidst pandemic. *Journal of English Teaching, 7*(3), 382-394.

Abdous, M., & Yoshimura, M. (2010). Learner outcomes and satisfaction: A comparison of live video- streamed instruction, satellite broadcast instruction, and face-to-face instruction. *Computers & Education*, *55*, 733-741.

Allen, I. E., & Seaman, J. (2010). *Class differences: Online education in the United States*. Babson Survey Research Group.

Allen, I. E., & Seaman, J. (2011). *Going the distance online education in the United States, 2011*. Babson Survey Research Group and Quahog Research Group, LLC.

Allen, I.E., & Seaman, J. (2014). *Grade change: Tracking online education in the United States*. Babson Survey Research Group.

Ally, M. (2007). *Role and function of theory in online education development and delivery, foundations of educational theory for online learning, theory and practice of online learning*. Athabasca University Press.

Ally, M. (2008). Foundations of educational theory for online learning. In T. Anderson (Ed.), *The theory and practice of online learning* (pp. 15–44). Athabasca University Press.

Almalhy, K. M. T. (2016). *The impact of adding live virtual classroom discussion to asynchronous online discussion in a blended information and communication technology course* (ProQuest No. 10196535) [Doctoral dissertation, Southern Illinois University]. ProQuest Dissertations and Theses Global.

Almrashdeh, I. A., Sahari, N., Zin, N. Z. M., & Alsmadi, M. (2011). Distance learning management system requirements from students' perspective. *Journal of Theoretical and Applied Information Technology, 24*(1), 17-27.

Alqadoumi, O. M. (2012). *Merging the forces of asynchronous tutoring and synchronous conferencing: A qualitative study of Arab ESL academic writers using e-tutoring* (ProQuest No. 3504485) [Doctoral dissertation, Indiana University of Pennsylvania]. ProQuest Dissertations and Theses Global.

Anastasiades, P. S. (2008). Blending interactive videoconferencing and asynchronous learning in adult education: Towards a constructivism pedagogical approach–a case study at the university of Crete (E.DIA.M.ME.). In S. Negash, M. E. Whitman, A. B. Woszczynski, K. Hoganson, & H. Mattord (Eds.), *Handbook of distance learning for real-time and asynchronous information technology education* (pp. 24–64). Information Science Reference.

Anastasiades, P. S. (2009). *Interactive videoconferencing and collaborative distance learning for K-12 students and teachers: Theory and practice.* Nova Science Publisher, Inc.

Arabasz, P., Pirani, J., & Fawcett, D. (2003). Supporting e-learning in higher education. *Educause Center for Applied Research* https://library.educause.edu/-/media/files/library/2003/7/ekf0303-pdf.pdf

Archambault, L., Kennedy, K., Shelton, C., Dalai, M., McAllister, L., & Huyett, S. (2016). Incremental progress: Re-examining field experiences in K-12 online learning context in the United States. *Journal of Online Learning Research, 2*(3), 303-326.

Ary, D. J., Jacobs, L., Razavieh, A. A., & Sorensen, C. (2006). *Introduction to research in education*. Cengage Learning, Inc.

Aydın, E., & Erol, S. (2021). The views of Turkish language teachers on distance education and digital literacy during Covid-19 pandemic. *International Journal of Education & Literacy Studies, 9*(1), 60-71. https://doi.org/10.7575/aiac.ijels.v.9n.1p.60

Bejerano, A. R. (2008). Raising the question #11: The genesis and evolution of online degree programs: who are they for and what have we lost along the way? *Communication Education, 57*(3), 408.

Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day.* International Society for Technology in Education.

Berti, M. (2020). Best practices for online language teaching with 360-degree videos. In Ferdig, R.E., Baumgartner, E., Hartshorne, R., Kaplan-Rakowski, R., & Mouza, C. (Eds.), *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field* (pp. 691-694) [eBook edition]. Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/p/216903/

Bottino, R. M. (2014). Opportunities and critical issues in Italy's strategy for digital schools. In R. Huang, Kinshuk, & J. K. Price (Eds.), *ICT in education in global context: Emerging trends report 2013 - 2014* (pp. 3-18). Springer.

Braun, T. (2008). Making a choice: The perceptions and attitudes of online graduate students. *Journal of Technology and Teacher Education*, *16*(1), 63-92.

Casarotti, M., Filipponi, L., Pieti, L., & Sartori, R. (2002). Educational interaction in distance learning: Analysis of a one-way video and two-way audio system. *PsychNology Journal, 1*(1), 28-38.

Cassel, R. (1968). Facilitating student satisfaction in learning. *Peabody Journal of Education, 45*(4)*,* 225-228.

Castellan, C. M. (2010). Quantitative and qualitative research: A view for clarity. *International Journal of Education*, *2*(2), 1-14.

Chen, X. L., Zou, D., Xie, H. R., & Su, F. (2021). Twenty-five years of computer-assisted language learning: A topic modeling analysis. *Language Learning & Technology*, *25*(3), 151–185. http://hdl.handle.net/10125/73454

Chen, Y., Chen, N.-S., & Tsai, C.-C. (2009). The use of online synchronous discussion for web based professional development for teachers. *Computers & Education*, *53*(4), 1155-1166.

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

Çakmak, F. (2020). Mobile learning and mobile assisted language learning in focus. *Language and Technology, 1*(1), 30-48.

Denning, P. J. (1999). Teaching as a social process. *Educom Review, 34*(3). https://library.educause.edu/resources/1999/1/teaching-as-a-social-process

Dilbeck, J. D. (2008). *Perceptions of academic administrators towards quality indicators in Internet based distance education.* (ProQuest No. 3305431) [Doctoral dissertation, Indiana University of Pennsylvania] ProQuest Dissertations and Theses Global.

Dixon, R., Dixon, K., & Siragusa, L. (2007). Individuals' perceptions of online environments: What adult learners are telling us. In R. J. Atkinson, C. McBeath, S. K. A. Soong, & C. Cheers (Eds.), In *ICT: Providing choices for learners and learning. Proceedings Ascilite Singapore 2007* (207-218). https://ascilite.org/conferences/singapore07/procs/dixon.pdf

Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford University Press.

Dörnyei, Z., & Taguchi, T. (2010). *Questionnaires in second language research: Construction, administration, and processing* (2nd ed.). Routledge.

Eastmond, D., & Ziegahn, L. (1995). Instructional design for the online classroom. In Z. L. Berge, & M. P. Collins (Eds.) *Computer mediated communication and the online classroom in distance learning* (pp. 59-80). Hampton Press.

Egbert, J. (2005). *CALL essentials: Principles and practice in CALL classrooms.* TESOL.

Engeldinger, E. A., & Love, M. G. (1997). Taking instruction to where it will be used: Tutoring faculty in their offices. *CAUSE.* https://www.educause.edu/ir/library/html/cnc9747/cnc9747.html

Erarslan, A., & Arslan, A. (2020). Online learning experiences of university students in ELT and the effects of online learning on their learning practices. *Language and Technology, 2*(1), 44-58.

Folinsbee, S. (2008). Online learning for adults: Factors that contribute to success-a literature review. *College Sector Committee for Adult Upgrading*. http://en.copian.ca/library/research/csc/litreview/litreview.pdf

Foulger, T., & Jimenez-Silva, M. (2007). Enhancing the writing development of English language learners: Teacher perceptions of common technology in project-based learning. *Journal of Research in Childhood Education*, *22*(2), 109-124.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. (2012). *How to design and evaluate research in education* (6th ed.). McGraw-Hill.

Fullan, M., & Stiegelbauer, S. (1991). *The new meaning of education change.* Teacher College Press.

Fulkerth, B. (1992). Computer romance? Those were the days. *The Quarterly of the National Writing Project and the Center for the Study of Writing and Literacy*, *14*(2), 1-8.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction* (8th ed.). Pearson Education.

Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. Jossey-Bass.

Gibson, C., & Cohen, S. (Eds.). (2003). *Virtual teams that work: Creating conditions for effective virtual teams.* Jossey-Bass.

Giesbers, B., Rienties, B., Tempelaar, D., & Gijselaers, W. (2013). A dynamic analysis of the interplay between asynchronous and synchronous communication in online learning: The impact of motivation. *Journal of Computer Assisted Learning, 30*(1), 30-50.

Goodyear, P., & Dimitriadis, Y. (2013). In medias res: Reframing design for learning. *Research in Learning Technology*, *21*. https://journal.alt.ac.uk/index.php/rlt/article/view/1391

Gough, E., DeJong, D., Grundmeyer, T., & Baron, M. (2017). K-12 teacher perceptions regarding the flipped classroom model for teaching and learning. *Journal of Educational Technology Systems*, *45*(3), 390-423.

Harvil, H. R. (2018). *Teacher perceptions on the use of technology with English language learners* (ProQuest No. 10814762) [Doctoral dissertation, Liberty University]. ProQuest Dissertations and Theses Global.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *EDUCAUSE REVIEW*. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Holden, J. T., & Westfall, P. J.-L. (2010). *An instructional media selection guide for distance learning-implications for blended learning featuring an introduction to virtual worlds* (2nd ed.). United States Distance Learning Association (USDLA).

Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *EDUCAUSE Quarterly*, *31*(4), 51-55. https://er.educause.edu/articles/2008/11/asynchronous-and-synchronous-elearning

Karatay, Y., & Hegelheimer, V. (2021). CALL teacher training—Considerations for low-resource environment: Overview of CALL teacher training. *CALICO Journal*, *38*(3), 271–295. https://doi.org/10.1558/cj.20159

Kentera, V. (2016). *Facilitator satisfaction with cultivating synchronous and asynchronous English Proficiency Levels: A qualitative study* (ProQuest No. 10155673) [Doctoral dissertation, Northcentral University]. ProQuest Dissertations and Theses Global.

Kessler, G. (2021). Current realities and future challenges for CALL teacher preparation. *CALICO Journal*, *38*(3), i–xx. https://doi.org/10.1558/cj.21231

King, F. B., Young, M. F., Drivere-Richmond, K., & Schrader, P. G. (2001). Defining distance learning and distance education. *AACE Journal, 9*(1), 1-14.

Korkmaz, S., & Mirici, İ. H. (2021). Converting a conventional flipped class into a synchronous online flipped class during COVID-19: University students' self-regulation skills and anxiety. *Interactive Learning Environments*. https://doi.org/10.1080/10494820.2021.2018615

Krüger, S. (2006). *Students' experiences of e-learning: A virtual ethnography into blended online learning*. [Paper presentation]. 5th International Conference on Networked Learning 2006, Lancaster, UK.

Lederman, D. (2019, December 11). *Online enrollments grow, but pace slows*. Inside Higher Ed. https://www.insidehighered.com/digital-learning/article/2019/12/11/more-students-study-online-rate-growth-slowed-2018

LeShea, A. V. (2013). *The effects of synchronous class sessions on students' academic achievement and levels of satisfaction in an online introduction to computers course* (ProQuest No. 3603345) [Doctoral dissertation, Liberty University]. ProQuest Dissertations and Theses Global.

Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford University Press.

Levy, M., & Hubbard, P. (2005). Why call call "CALL"? *Computer Assisted Language Learning, 18*(3), 143–149.

Lewis, L., Farris, E., Snow, K., & Levin, D. (1999*). Distance education at postsecondary education institutions: 1997-98*. National Center for Education Statistics*. https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2000013

Lim, D. H., Morris, M. L., & Kupritz, V. W. (2014). Online vs. blended learning: Differences in instructional outcomes and learner satisfaction. *Journal of Asynchronous Learning Networks*, *11*(2), 27-42.

Lionarakis, A. (2003, June 15-18). *A preliminary framework for a theory of open and distance learning: The evolution of its complexity*. [Paper presentation]. 12th Conference of the European Distance Education Network, Rhodes, Greece.

Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). Academic Press.

Maarop, A. H., & Embi, M. A. (2016). Implementation of blended learning in higher learning institutions: A review of literature. *International Education Studies*, *9*(3), 41.

Mackey, A., & Gass, S. M. (2005). *Second language research: Methodology and design*. Lawrence Erlbaum Associates.

Maitland, C. (2000). Rewards remain dim for professors who pursue digital scholarship. *The Chronicle of Higher Education*. https://www.chronicle.com/article/rewards-remain-dim-for-professors-who-pursue-digital-scholarship/

Marshall, G. E., McFadden, A. C., & Price, B. J. (1999). An overview of online educational delivery applications. *Online Journal of Distance Learning Administration*, *2*(3), 1-8. https://www.westga.edu/~distance/marsh23.html

Marshall, H. W. (2017, February 08). The synchronous online flipped learning approach. *Flipped Learning Global Initiative*. https://community.flglobal.org/the-synchronous-online-flipped-learning-approach/

Marshall, H. W., & Rodrigues-Buitrago, C. (2017, March). *The synchronous online flipped learning approach.* https://community.flglobal.org/the-synchronous-online-flipped-learning-approach/

Martin, F., Polly, D., & Ritzhaupt, A. (2020). Bichronous online learning: Blending asynchronous and synchronous online learning. *EDUCAUSE REVIEW.* https://er.educause.edu/articles/2020/9/bichronous-online-learning-blending-asynchronous-and-synchronous-online-learning

Matthews, D. (1999). The origins of distance education and its use in the United States. *T.H.E. Journal, 27*(2), 54.

McBrien, J. L., Cheng, R., & Jones, P. (2009). Virtual spaces: Employing a synchronous online classroom to facilitate student engagement in online learning. *The International Review of Research in Open and Distributed Learning*, *10*(3), 1-17.

McCormick, C. R. (2018). *Online learning: Investigating the impact of asynchronous and synchronous communication, on the students of color* (ProQuest No. 10830262) [Doctoral dissertation, Wingate University]. ProQuest Dissertations and Theses Global.

Midkiff, S. F., & DaSilva, L. A. (2000*). Leveraging the web for synchronous versus asynchronous distance learning.* [Paper presentation]. The International Conference on Engineering 2000, Taipei & Tainan, Taiwan.

Muijs, D. (2004). *Doing quantitative research in education with SPSS*. Sage Publication.

Nilson, L. B., & Goodson, L. A. (2018). *Online teaching at its best: Merging instructional design with teaching and learning research*. Jossey-Bass.

Norton, A., Cherastidtham, I., & Mackey, W. (2018). *Mapping Australian higher education 2018*. Grattan Institute. https://grattan.edu.au/wp-content/uploads/2018/09/907-Mapping-Australian-higher-education-2018.pdf

Oblinger, D. G., & Maruyama, M. K. (1996). Distributed learning. CAUSE, Professional paper series. *ERIC*. https://files.eric.ed.gov/fulltext/ED396647.pdf

Oliver, K., & Stallings, D. (2014). Preparing teachers for emerging blended learning environments. *Journal of Technology and Teacher Education*, *22*(1), 57-81.

Otto, E. K. S. (2017). From past to present: A hundred years of technology for L2 learning. In C. Chapelle & S. Sauro (Eds.), *The handbook of technology and second language teaching and learning* (pp. 10-25). John Wiley & Sons, Inc.

Owston, R., Sinclair, M., & Wideman, H. (2008). Blended learning for professional development: An evaluation of a program for middle school mathematics and science teachers. *The Teachers College Record*, *110*(5), 1033-1064.

Owston, R., Wideman, H., Murphy, J., & Lupshenyuk, D. (2008). Blended teacher professional development: A synthesis of three program evaluations. *The Internet and Higher Education*, *11*(3-4), 201-210.

Paulson, K. (2001). FIPSE: Thirty years of learning anytime and anywhere. *Change, 33*(5), 37.

Peng, H., Jager, S., & Lowie, W. (2021). Narrative review and meta-analysis of MALL research on L2 skills. *ReCALL, 33*(3), 278-295.

Peng, S. (2010). *The implementation of online learning for ESL programs* (ProQuest No. 3418148) [Doctoral dissertation, University of Southern California]. ProQuest Dissertations and Theses Global.

Perveen, A. (2016). Synchronous and asynchronous e-language learning: A case study of Virtual University of Pakistan. *Open Praxis*, *8*(1), 21–39.

Power, M. (2008). The emergence of a blended online learning environment. *MERLOT Journal of Online Learning and Teaching*, *4*(4), 503-514.

Psycharis, S., Chalatzoglidis, G., & Kalogiannakis, M. (2013). Moodle as a learning environment in promoting conceptual understanding for secondary school students. *Eurasia Journal of Mathematics, Science & Technology Education*, *9*(1), 11-21.

Qasem, A. A., & Viswanathappa, G. (2016). The teachers' perception towards ICT integration: Professional development through blended learning. *Journal of Information Technology Education: Research*, *15*, 561-575. https://www.informingscience.org/Publications/3562

Ray, K., & Zenetis, J. (2009). *Interactive videoconferencing: K-12 lessons that work*. International Society for Technology in Education.

Reid, J. M. (1995). *Learning styles in the ESL/EFL classroom*. Heinle & Heinle Publishers.

Robinson, C., & Hullinger, H. (2008). New benchmarks in high education: Student engagement in online learning. *Journal of Education for Business, 84*, 101-109.

Rockinson-Szapkiw, A. J. (2009). *The impact of asynchronous and synchronous instruction and discussion on cognitive presence, social presence, teaching presence, and learning* (ProQuest No. 3370135) [Doctoral dissertation, Regent University]. ProQuest Dissertations and Theses Global.

Scherer, R., Siddiq, F., & Teo, T. (2015). Becoming more specific: Measuring and modeling teachers' perceived usefulness of ICT in the context of teaching and learning. *Computers & Education*, *88,* 202-214.

Schmidt, R. W. (1983). Interaction, acculturation, and the acquisition of communicative competence: A case study of an adult. In N. Wolfson & E. Judd (Eds.), *Sociolinguistics and language acquisition* (pp. 137-174). Newbury House.

Schullo, S., Kromrey, J., Barron, A. E., & Hogarty, K. (2005). *Enhancing online courses with synchronous software: An analysis of strategies and interactions*. [Paper presentation]. National Educational Computing Conference, Philadelphia, USA.

Shi, S., & Morrow, B. V. (2006). E-Conferencing for instruction: What works? *EDUCAUSE Quarterly*, *29*(4), 42-49.

Smith, D. E., & Mitry, D. J. (2008). Investigation of higher education: The real costs and quality of online programs. *Journal of Education for Business, 83*(3), 147-152.

Stein, J., & Graham, C. R. (2014). *Essentials for blended learning: A standards-based guide*. Routledge.

Stephens, K. K., & Mottet, T. P. (2008). Interactivity in a web conference training context: Effects on trainers and trainees. *Communication Education, 57*(1), 88-104.

Sumner, J. (2000). Serving the system: A critical history of distance education. *Open Learning, 15*(3), 267-285.

Sundt, M. (2014). Adults and the higher education experience (part 1). *The Evolllution*. https://evolllution.com/opinions/adults-higher-education-experience-part-1/

Sundt, M. (2014). Adults and the higher education experience (part 2). *The Evolllution.* https://evolllution.com/opinions/adults-higher-education-experience-part-2/

Suthers, D. (2001, January 3-6). *Collaborative representations: Supporting face to face and online knowledge-building discourse*. [Paper presentation]. 34th Hawai`i International Conference on the System Sciences (HICSS-34), Maui, Hawaii.

Taber, K. S. (2018). The use of Cronbach's Alpha when developing and reporting research instruments in Science education. *Research in Science Education 48*, 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

Tallent-Runnels, M.K., Thomas, J., Lan, W., Cooper, S., Ahern, T., Shaw, S., & Liu, X. (2006). Teaching courses online: A review of the research. *Review of Educational Research, 76*(1), 93-135.

Téllez, K., & Manthey, G. (2015). Teachers' perceptions of effective schoolwide programs and strategies for English language learners. *Learning Environments Research*, *18*(1), 111-127.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, *27*(3), 425-478.

Vovides, Y., Sanchez-Alonso, S., Mitropoulou, V., & Nickmans, G. (2007). The use of e-learning course management systems to support learning strategies and to improve self-regulated learning. *Educational Research Review*, *2*(1), 64-74.

Vu, P., & Fadde, P. J. (2013). When to talk, when to chat: Student interactions in live virtual classrooms. *Journal of Interactive Online Learning*, *12*(2), 41-52.

Wang, Y., & Chen, N.S. (2007) Online synchronous language learning: SLMS over the Internet. *Innovate, 3*(3). https://www.researchgate.net/publication/29466793_Online_Synchronous_Language_Learning_SLMS_over_the_Internet

Wheeler, K. M. (2015). *A mixed method study examining synchronous-enhanced learning in distance education* (ProQuest No. 10814762) [Doctoral dissertation, University of South Florida]. ProQuest Dissertations and Theses Global.

Wilson, J. M. (1997). Distance learning for continuing education. *Educom Review*, *32*(2), 12-16.

Wilson, J. D. (2021). Moving from hybrid to bichronous: Unfounded fears and unexpected benefits. *A Journal of Leisure Studies and Recreation Education*, *32*(2), 12-16.

Yamagata-Lynch, L. C. (2014). Blending online asynchronous and synchronous learning. *The International Review of Research in Open and Distributed Learning, 15*(2), 190- 21.

Yaşar, D. I. (2020). *An investigation of the relationship between EFL instructors' perceptions on technology use and their possible language selves* (Publication No. 10336668) [Master's Thesis, İhsan Doğramacı Bilkent University]. Bilkent University.

Yorgancı, S. (2013). The effects of web-based distance education method on students' mathematics achievements. *Kastamonu Eğitim Dergisi, 23*(3), 1401-1420.

Young, J. R. (1997). Rethinking the role of the professor in an age of high-tech tools.

The Chronicle of Higher Education.

https://www.chronicle.com/article/rethinking-the-role-of-the-professor-in-an-

age-of-high-tech-tools/

Appendix A

Informed Consent Form

Questionnaire on EFL Instructors' Perceptions of Bichronous Online Teaching

Dear Instructor,

This questionnaire (*adapted from Venkatesh et al. (2003)) was prepared for my thesis within the scope of İhsan Doğramacı Bilkent University, Teaching English as a Foreign Language Master's Program, with the purpose of examining EFL instructors' perceptions of bichronous online teaching within the framework of "Unified Theory of Acceptance and Use of Technology" (Venkatesh et al., 2003) under the supervision of Asst. Prof. Dr. Tijen Akşit.

Your participation in this study is voluntary. The survey will take no more than 5 minutes. Please respond to each item in the survey.

All responses will be kept anonymous and confidential. The results of this study will be used for scholarly purposes only. The results of the study will be shared with you if you request them. If you need further information about the survey or the research, you can reach Deniz Uzun via the e-mail address stated below.

Thank you very much for your cooperation.

I have read the explanation above and I hereby give my consent to take part in the study.

(Bichronous online teaching is blended use of both synchronous and asynchronous modes of online education.)

Deniz Uzun

MA. Bilkent University/TEFL

Supervisor: Asst. Prof. Dr. Tijen Akşit

Appendix B

Pilot Questionnaire

Part I. - Demographic Information

Please indicate your response to the following questions by choosing the appropriate option.

1. What is your gender?
   o Female
   o Male
   o Prefer not to mention

2. What is your age?
   o 25-34
   o 35-44
   o 45-54
   o 55 and over

3. What is the highest degree that you have completed?
   o Bachelors
   o Master's
   o Doctorate

4. At which department have you completed your highest degree?
   o English Language Teaching
   o American/British Literature and Culture
   o Linguistics
   o Translation
   o Other

5. Do you have any other qualifications? (choose the most recent one completed)
   o CELTA/ICELT
   o DELTA
   o Other TESOL certificate(s)

6. How many years have you been teaching English?
   o 1-9
   o 10-19
   o 20-29
   o 30 and over

7. How competent are you in the use of educational technologies?

o Not competent (Cannot complete my teaching tasks)

o Somewhat competent (Can complete my teaching tasks with help)

o Competent (Can complete my teaching tasks)

o Very Competent (can teach others how to do it well)

Part II. – Perceived Competence in Bichronous Online Teaching

Please read the statements below and choose the most appropriate response for you.

*Bichronous online teaching is blended use of both synchronous and asynchronous modes of online education.

	Strongly Agree	Agree	Can't Decide	Disagree	Strongly Disagree
Performance					
1. I find bichronous online teaching useful in teaching EFL in my school.					
2. Using bichronous online teaching enables me to accomplish my teaching tasks more quickly.					
3. Using bichronous online teaching increases my productivity.					
Effort					
4. My interaction with bichronous online teaching is clear and understandable.					
5. It was easy for me to become skillful at using bichronous online teaching.					
6. I found bichronous online teaching easy to use in teaching EFL.					
7. Learning to use bichronous online teaching was easy for me.					
Attitude toward using bichronous online teaching					
8. Using bichronous online teaching is a good idea in teaching EFL.					
9. Using bichronous online teaching is a bad idea in teaching EFL.					

10. Using bichronous online teaching makes teaching EFL more interesting.					
11. Using bichronous online teaching is fun for teaching EFL.					
12. I like using bichronous online teaching for teaching EFL.					
Social influence					
13. People who influence my behaviour think that I should use bichronous online teaching in teaching EFL.					
14. People who are important to me think that I should use bichronous online teaching in teaching EFL.					
15. The senior management of my school has been helpful in the use of bichronous online teaching.					
16. In general, the school has supported the use of bichronous online teaching.					
Facilitating conditions					
17. I have the resources necessary to use bichronous online teaching.					
18. I have the knowledge necessary to use bichronous online teaching.					
19. Bichronous online teaching system is not compatible with other systems I use.					
20. A specific person (or group) is available for assistance with bichronous online teaching difficulties.					
Self-efficacy I can teach using bichronous online teaching …					
21. if there is no one around to tell me what to do as I go.					
22. if I can call someone for help if I got stuck.					
23. if I have a lot of time to complete the job for which the software was provided.					

24. if I have just the built-in help facility for assistance.					
Anxiety					
25. I feel apprehensive about using bichronous online teaching.					
26. It scares me to think that I could lose a lot while using bichronous online teaching by hitting the wrong key.					
27. I hesitate to use bichronous online teaching for fear of making mistakes I cannot correct.					
28. Bichronous online teaching is somewhat intimidating to me.					
Behavioral intention to use bichronous online teaching					
29. I intend to use bichronous online teaching in the future.					
30. I predict I would use bichronous online teaching in the future.					
31. I plan to use bichronous online teaching in the future.					

Adapted from Venkatesh et al. (2003)

Appendix C

Actual Study Questionnaire

Part I. - Demographic Information

Please indicate your response to the following questions by choosing the appropriate option.

1. What is your gender?
   o Female
   o Male
   o Prefer not to mention

2. What is your age?
   o 22-27
   o 28-35
   o 36-45
   o 45-54
   o 55+

3. What is the highest degree that you have completed?
   o Bachelor's
   o Master's
   o Doctorate

4. At which department have you completed your highest degree?
   o English Language Teaching
   o American/British Literature and Culture
   o Linguistics
   o Translation
   o Other (Please specify) _____

5. Do you have any other qualifications? (choose the most recent one completed)
   o CELTA/ICELT
   o DELTA (All 3 modules completed)
   o DELTA (1 or 2 modules completed)
   o Other teaching certificate(s) (Please specify)
   _____
   o None

6. How many years have you been teaching English?
   o 1-3
   o 4-9
   o 10-19
   o 20-29
   o 30+

7. How competent are you in the use of educational technologies?

   o Not competent at all (Cannot complete my teaching tasks)

   o Somewhat competent (Can complete my teaching tasks with help)

   o Competent (Can complete my teaching tasks)

   o Very Competent (can teach others how to do it well)

Part II. – Perceived Competence in Bichronous Online Teaching

Please read the statements below and choose the most appropriate response for you.

	Strongly Agree	Agree	Can't Decide	Disagree	Strongly Disagree
Performance					
1. I find bichronous online teaching useful in teaching EFL in my school.					
2. Using bichronous online teaching enables me to accomplish my teaching responsibilities more quickly.					
3. Using bichronous online teaching increases my productivity.					
Effort					
4. Using bichronous online teaching is clear and understandable for me.					
5. It was easy for me to become skillful at using bichronous online teaching.					
6. I found bichronous online teaching easy to use in teaching EFL.					
7. Learning to use bichronous online teaching was easy for me.					
Attitude toward using bichronous online teaching					
8. Using bichronous online teaching is a good idea in teaching EFL.					
9. Using bichronous online teaching is a bad idea in teaching EFL.					

10. Using bichronous online teaching makes teaching EFL more interesting.					
11. Using bichronous online teaching is fun for teaching EFL.					
12. I like using bichronous online teaching for teaching EFL.					
Social influence					
13. People who influence my behaviour think that I should use bichronous online teaching in teaching EFL.					
14. People who are important to me think that I should use bichronous online teaching in teaching EFL.					
15. The senior management of my school has been helpful in the use of bichronous online teaching.					
16. In general, the school has supported the use of bichronous online teaching.					
Facilitating conditions					
17. I have the resources necessary to use bichronous online teaching.					
18. I have the knowledge necessary to use bichronous online teaching.					
19. Bichronous online teaching system is not compatible with other systems I use.					
20. A specific person (or group) is available for assistance with bichronous online teaching difficulties.					
Self-efficacy I can teach using bichronous online teaching …					
21. if there is no one around to tell me what to do as I go.					
22. if I can call someone for help if I got stuck.					

23. if I have a lot of time to complete the job for which the software was provided.					
24. if I have just the built-in help facility for assistance.					
Anxiety					
25. I feel apprehensive about using bichronous online teaching.					
26. It scares me to think that I could lose a lot while using bichronous online teaching by hitting the wrong key.					
27. I hesitate to use bichronous online teaching for fear of making mistakes I cannot correct.					
28. Bichronous online teaching is somewhat intimidating to me.					
Behavioral intention to use bichronous online teaching					
29. If I have the decision-making power, I intend to use bichronous online teaching in the future.					
30. If I have the decision-making power, I predict I would use bichronous online teaching in the future.					
31. If I have the decision-making power, I plan to use bichronous online teaching in the future.					

Adapted from Venkatesh et al. (2003)

Appendix D

Means and Standard Deviations of Questions in the Second Part of the Survey for Age

Dependent Variable	35 or younger		36 – 45		46 or older	
	M	*SD*	*M*	*SD*	*M*	*SD*
Performance 1	4.27	0.51	4.16	0.82	3.78	0.76
Performance 2	4.00	0.74	3.76	1.06	3.33	1.01
Performance 3	3.77	0.97	3.79	1.09	3.33	0.92
Effort 1	4.33	0.54	4.21	0.76	3.89	0.74
Effort 2	4.23	0.56	3.94	0.88	3.50	0.97
Effort 3	4.23	0.56	4.01	0.91	3.67	0.71
Effort 4	4.13	0.62	3.93	0.85	3.67	0.98
Attitude toward Using Bichronous Online Teaching 1	4.13	0.68	4.16	0.89	3.69	0.74
Attitude toward Using Bichronous Online Teaching 2	1.83	0.64	1.78	0.93	2.17	0.84
Attitude toward Using Bichronous Online Teaching 3	3.67	0.95	3.66	0.97	3.22	0.89
Attitude toward Using Bichronous Online Teaching 4	3.67	0.88	3.58	0.92	3.14	0.83
Attitude toward Using Bichronous Online Teaching 5	3.90	0.84	3.91	0.93	3.47	1.00
Social Influence 1	3.43	0.77	3.34	0.86	3.22	0.68
Social Influence 2	3.43	0.81	3.48	0.91	3.19	0.66
Social Influence 3	4.17	0.53	4.13	0.75	4.00	0.82
Social Influence 4	4.30	0.53	4.24	0.580	4.17	0.69
Facilitating Conditions 1	4.47	0.50	4.21	0.74	4.08	0.60
Facilitating Conditions 2	4.17	0.64	4.07	0.68	4.00	0.53
Facilitating Conditions 3	2.27	0.74	2.21	0.88	2.47	1.02
Facilitating Conditions 4	4.17	0.64	4.03	0.85	3.97	0.69
Self-efficacy 1	3.83	0.74	4.07	0.70	3.97	0.81
Self-efficacy 2	3.37	0.96	3.66	0.93	3.28	0.94

Self-efficacy 3	3.23	1.04	3.57	0.89	3.28	0.91
Self-efficacy 4	3.53	0.90	3.46	1.00	3.36	0.99
Anxiety 1	2.63	1.15	2.63	1..12	2.58	1.05
Anxiety 2	1.87	0.62	1.96	0.66	2.06	0.98
Anxiety 3	1.73	0.45	1.94	0.62	1.94	1.01
Anxiety 4	1.73	0.52	1.96	0.68	2.06	1.06
Behavioral Intention to Use Bichronous Online Teaching	3.77	0.81	4.07	1.04	3.28	1.05
Behavioral Intention to Use Bichronous Online Teaching 2	3.77	0.81	4.10	1.06	3.28	0.94
Behavioral Intention to Use Bichronous Online Teaching 3	3.77	0.81	4.09	1.06	3.22	1.07

Appendix E

Means and Standard Deviations of Questions in the Second Part of the Survey for Academic Qualifications

Dependent Variable	35 or younger		36 – 45		46 or older	
	M	*SD*	*M*	*SD*	*M*	*SD*
Performance 1	4.01	0.66	3.30	0.88	3.48	0.81
Performance 2						
Performance 3						
Effort 1	4.23	0.49	4.02	0.77	3.68	0.71
Effort 2						
Effort 3						
Effort 4						
Attitude toward Using Bichronous Online Teaching 1	3.44	0.49	3.41	0.58	3.13	0.51
Attitude toward Using Bichronous Online Teaching 2						
Attitude toward Using Bichronous Online Teaching 3						
Attitude toward Using Bichronous Online Teaching 4						
Attitude toward Using Bichronous Online Teaching 5						
Social Influence 1	3.83	0.51	3.79	0.61	3.64	0.52
Social Influence 2						
Social Influence 3						
Social Influence 4						
Facilitating Conditions 1	3.76	0.35	3.63	0.41	3.63	0.38
Facilitating Conditions 2						
Facilitating Conditions 3						
Facilitating Conditions 4						
Self-efficacy 1	3.49	0.61	3.69	0.65	3.47	0.60
Self-efficacy 2						

Self-efficacy 3						
Self-efficacy 4						
Anxiety 1	1.99	0.53	2.11	0.63	2.15	0.84
Anxiety 2						
Anxiety 3						
Anxiety 4						
Behavioral Intention to Use Bichronous Online Teaching	3.76	0.81	4.08	1.05	1.05	0.98
Behavioral Intention to Use Bichronous Online Teaching 2						
Behavioral Intention to Use Bichronous Online Teaching 3						

Appendix F

Means and Standard Deviations of Questions in the Second Part of the Survey for Professional Qualifications

Dependent Variable	35 or younger		36 – 45		46 or older	
	M	*SD*	*M*	*SD*	*M*	*SD*
Performance 1	4.01	0.66	3.30	0.88	3.48	0.81
Performance 2						
Performance 3						
Effort 1	4.23	0.49	4.02	0.77	3.68	0.71
Effort 2						
Effort 3						
Effort 4						
Attitude toward Using Bichronous Online Teaching 1	3.44	0.49	3.41	0.58	3.13	0.51
Attitude toward Using Bichronous Online Teaching 2						
Attitude toward Using Bichronous Online Teaching 3						
Attitude toward Using Bichronous Online Teaching 4						
Attitude toward Using Bichronous Online Teaching 5						
Social Influence 1	3.83	0.51	3.79	0.61	3.64	0.52
Social Influence 2						
Social Influence 3						
Social Influence 4						
Facilitating Conditions 1	3.76	0.35	3.63	0.41	3.63	0.38
Facilitating Conditions 2						
Facilitating Conditions 3						
Facilitating Conditions 4						
Self-efficacy 1	3.49	0.61	3.69	0.65	3.47	0.60
Self-efficacy 2						

Self-efficacy 3						
Self-efficacy 4						
Anxiety 1	1.99	0.53	2.11	0.63	2.15	0.84
Anxiety 2						
Anxiety 3						
Anxiety 4						
Behavioral Intention to Use Bichronous Online Teaching	3.76	0.81	4.08	1.05	1.05	0.98
Behavioral Intention to Use Bichronous Online Teaching 2						
Behavioral Intention to Use Bichronous Online Teaching 3						

Appendix G

Distribution of Other Certificates

Name of the Certificate	Number of Instructors
COTE (Certificate for Overseas Teachers of English)	14
METU In-service training	6
Hacettepe University Pedagogical Formation Certificate	4
CertELT	2
Fulbright Foreign Language Teaching Assistant	1
ICT in ELT	1
CEELT	1
METU CTE	1
Train the Trainer	1
ELT Diploma 1	1
SLTEP	1
Teaching English to Adults by Oxford University	1

Appendix H

The Original Items Used in Estimating UTAUT

Performance expectancy
U6: I would find the system useful in my job.
RA1: Using the system enables me to accomplish tasks more quickly.
RA5: Using the system increases my productivity.
OE7: If I use the system, I will increase my chances of getting a raise.
Effort expectancy
EOU3: My interaction with the system would be clear and understandable.
EOU5: It would be easy for me to become skillful at using the system.
EOU6: I would find the system easy to use.
EU4: Learning to operate the system is easy for me.
Attitude toward using technology
A1: Using the system is a bad/good idea.
AF1: The system makes work more interesting.
AF2: Working with the system is fun.
Affect1: I like working with the system.
Social influence
SN1: People who influence my behavior think that I should use the system.
SN2: People who are important to me think that I should use the system.
SF2: The senior management of this business has been helpful in the use of the
system.
SF4: In general, the organization has supported the use of the system.
Facilitating conditions
PBC2: I have the resources necessary to use the system.
PBC3: I have the knowledge necessary to use the system.
PBC5: The system is not compatible with other systems I use.
FC3: A specific person (or group) is available for assistance with system difficulties.
Self-efficacy
I could complete a job or task using the system…
SE1: If there was no one around to tell me what to do as I go.
SE4: If I could call someone for help if I got stuck.
SE6: If I had a lot of time to complete the job for which the software was provided.
SE7: If I had just the built-in help facility for assistance.
Anxiety
ANX1: I feel apprehensive about using the system.
ANX2: It scares me to think that I could lose a lot of information using the system by
hitting
the wrong key.
ANX3: I hesitate to use the system for fear of making mistakes I cannot correct.
ANX4: The system is somewhat intimidating to me.
Behavioral intention to use the system
BI1: I intend to use the system in the next <n> months.
BI2: I predict I would use the system in the next <n> months.
BI3: I plan to use the system in the next <n> months.

Taken from "User Acceptance of Information Technology: Toward a Unified View" by Venkatesh et al., 2003, *MIS Quarterly*, *27*(3), p. 460. Copyright 2003 by MIS Quarterly.