



Investigating Teachers' Perceptions of Their Own Teaching Effectiveness during Covid-19 pandemic in the online EFL Courses

Alireza Navidmoghammad
Istanbul university, Türkiye

Abstract: *This study examined teacher perspectives of EFL online instruction in a Turkish higher education institution during COVID-19. Due of the global COVID-19 pandemic, many university teachers who used face-to-face teaching had to change their approaches. A revised electronic Technological Pedagogical Content Knowledge (TPACK) survey was used to analyze participants' perceptions on their own online teaching at COVID19. It also looked at the issues EFL teachers faced during the COVID-19 pandemic and their ideas for a more successful online EFL teaching experience. Thirty-six only female instructors took part in the study by filling out an online questionnaire. Overall, the data supports a favorable impression of online education's efficacy. Participants in this study felt that the online experience allowed them to develop as learners. It was also discovered that students' interest in studying increased when they took classes online. Training for teachers, technical assistance, enabling Blackboard's extra features, and flexibility with exams and class configuration were recommended for a more productive online experience.*

Keywords: *EFL teachers; Teaching Effectiveness; COVID-19; Online Courses; TPACK*

INTRODUCTION

Many university professors who rely on direct student-instructor interaction as their major mode of education have been compelled to swiftly adapt in the wake of the global COVID-19 outbreak. Numerous universities in Turkey employ these teachers, and so do other educational institutions. Due to the rapid spread of COVID-19, the Turkish Ministry of Education has closed all schools, universities, and other educational institutions. Online learning platforms for remote education were mandated for all schools. On March 8, 2020, 1.6 million university students in Turkey went online, per data from the country's Ministry of Education. As a result of this unexpected change, professors had to use their online teaching experience, assuming they had any. Ultimately, the effectiveness of the online teaching experience depended on instructors' technology competence, which should be in sync with their material and pedagogical skills (Koehler, Mishra, & Zellner, 2015).

Many Turkish universities were still using primarily face-to-face teaching methods until at least March 2020, but the vast majority of their students are

"digital natives" who rely heavily on the Internet and other forms of technology (Imbriale, Schiner & Elmendorf, 2017). Šorgo, Bartol, Dolničar, and Boh Podgornik (2017) note that digital natives have distinctive patterns of self-expression, interpersonal interaction, and intellectual development. The interests of today's "Digital Natives" appear to be more focused on visual media and multitasking (Imbriale et al., 2017). Despite recommendations toward a more digitally-oriented teaching style, many teachers have stuck to the traditional method of face-to-face instruction with minimal exposure to technology despite students' interest (Alghamdi & Deraney, 2018). As a result, it is believed that a blend of in-person and online instruction supported by technology and sound pedagogical practices is essential (Tondeur, Forkosh-Baruch, Prestridge, Albion & Edirisinghe, 2016). Better learning opportunities and a more motivating environment can be found in both face-to-face and virtual teaching (Milthorpe, Clarke, Fletcher, Moore & Stark, 2018). The COVID-19 pandemic and the subsequent shift to online education presented an opportunity to evaluate newer, more technologically-oriented strategies.

Online learning, as defined by Carliner (2004), is the availability of educational content and services through electronic means. Anderson (2011), on the other hand, clarifies online learning as a small segment of online learning that has always been involved with giving access to an academic opportunity that is, at the very least, more flexible in time and space than campus-based education. During a pandemic, the term "online learning" refers to the practice of instructing and being instructed via remote means, as opposed to physically assembling a classroom. Devices such as smartphones, laptops, iPads, and tablets are all suitable for using the technology. Whatsapp, Google Classroom, Ruang Guru, Quipper, Zoom Meeting, etc. are just a few examples of available platforms that can be used to facilitate online education and training with the help of technological advancements. In his review of a book on e-learning strategies, Marc (2002) outlined some of the benefits of distance education: the ability to study when and where it is most convenient for the student, the ability to form relationships with other students through the use of online discussion boards, the ability to accommodate students' varying levels of motivation and focus, the ability to accommodate students' financial constraints, the ability to accommodate students' varying levels of ability, and the ability to accommodate students' varying rates of learning. Due to time constraints, educators who wanted to make the transition from traditional classroom EFL instruction to online instruction had to quickly apply a wide range of specialized knowledge. The nature of EFL courses is distinct from other courses that students are presented to in the first year at many universities preparatory schools, and this is true not only because face-to-face instruction is distinct from online instruction (Golden, 2015; Rockinson-Szapkiw & Wendt, 2015; Scheg, 2014). The English as a Foreign Language classes are lengthy and time-consuming. It is critical that there is adequate interaction between the teacher and students, as well as among the students themselves. The students' progress depends on them being able to communicate and work together in such a way (Rockinson-Szapkiw & Wendt, 2015).

The studies that investigated the application of TPACK in various contexts dug deeper into the ways in which TPACK may be used and adapted. The purpose

of this study was to evaluate English as a Foreign Language (EFL) instructors' perceptions in a higher education institution on the efficiency of their online teaching experience during COVID-19 and the implementation of TPACK. The research was carried out in order to answer mainly the following questions:

1. What is an English (as a Foreign language) teacher 's perceptions about the effectiveness of online learning in his/her course based on the modified TPACK survey?
2. What relationship might be between the instructor's TPACK score and his/her perceived level of effectiveness in teaching EFL online during COVID-19?

LITERATURE REVIEW

The process of learning is fluid and ever-changing. Time and, more specifically, educators are having an impact on this. Teachers need to have a firm grasp on a set of skills known as instructional competencies if they want their pupils to learn and retain as much as possible (West, Swanson, & Lipscomb, 2017). It's not the same to teach a lesson as it was when you were in school. These days' youngsters have a very different way of thinking and processing information than their predecessors did. Modifying how lessons are delivered may be the most effective method of individualized training for some students (Iris Center, 2019). In 1986, Shulman held the conventional view that educators are armed with both subject matter expertise (content knowledge) and pedagogical know-how (knowledge of how to teach, including expertise in a variety of teaching approaches). His term for this is "pedagogical content knowledge" (PCK) (McGraw-Hill, 2019). The three components of the PCK model—technology, pedagogy, and content knowledge—are all made possible by the ubiquitous presence of technology in today's classrooms (TPACK). While context is crucial to education, it is sometimes overlooked in studies of the technological pedagogical content knowledge (TPACK) framework, or its precise significance is unclear (Rosenberg & Koehler, 2015). As an added bonus, the TPACK framework can be used by teachers who provide courses online as a means of professional growth and advancement (Benson & Ward, 2013; Kolb & Kolb, 2017). It is also helpful for getting a better grasp on how effective online lecturers are (Anderson, Barham & Northcote, 2013a; Benson & Ward, 2013). It has been hypothesized that improved teacher effectiveness can be achieved through the fusion of content, pedagogy, and technology (Koehler et al., 2014). Self-reported pedagogical practices and teachers' own conceptions of how technological, pedagogical, and content-area knowledge are integrated can also be examined with the TPACK framework (Anderson et al., 2013).

It has been usual practice to segregate the learning of material, methodology, and technology into their own courses (Bower, Dalgarno, Kennedy, Lee & Kenney, 2015). Teachers need to learn more about the interplay between their own technological, pedagogical, and topic expertise if they are to successfully integrate it into their lessons (Koehler et al., 2014). According to Nordin and Tengku Ariffin (2016), TPACK is "the process by which educators gain an in-depth understanding of how technological knowledge, content knowledge, and pedagogical knowledge all contribute to and are enriched by

student learning" (Rosyid, 2016). Using proper pedagogical and technological approaches, it shows how an educator can improve students' grasp of the material at hand (Sholihah, Yuliati, & Wartono, 2016). Teachers who have mastered the pedagogical content knowledge (TPACK) framework can effectively communicate course material by making use of appropriate technological tools (Nordin & Tengku Ariffin, 2016). K-12 conventional teachers were the original target audience for the TPACK framework, which was developed as a tool for self-evaluation (Bower et al., 2015). Eventually, it was expanded to include college-level courses taken online.

To make it simpler to remember and create a more cohesive unity for the three types of knowledge addressed by the TPCK structure, the abbreviation was shortened to TPACK (pronounced "tee-pack") (Schmidt et al., 2009). Shulman's concept of Pedagogical Content Knowledge (PCK) is expanded upon in the TPACK framework, which places technological expertise in the context of both subject matter and instructional strategies. The concept of TPACK has been used for quite some time, even if the term is relatively new. Mishra and Kohler (2006), in the context of educational software design, made a brief reference to the triad of content, theory as opposed to pedagogy, and technology, which is seen as a precursor to the TPCK notion. Technology, content, and pedagogy are all discussed at length by authors like Keating and Evans (2001), Pierson (2001), and Zhao (2003). Various classifying schemes have been used by other researchers to address concepts that are similar, such as integration literacy (Gunter & Bumbach, 2004), PCK associated to information and communication technologies (ICT), technological content knowledge (Slough & Connell, 2006), and electronic PCK or e-PCK (e.g., Franklin, 2004; Irving, 2006). Hughes (2004-2005), McCrory (2004), Margerum-Leys and Marx (2002), Niess (2005), and Slough & Connell (2006) are some others who have shown an awareness of the connections between content, pedagogy, and technology.

Understanding the interdependencies and nuances between these three pillars of knowledge (technological, pedagogical, and content) is the goal of the TPACK framework (Koehler & Mishra, 2008; Mishra & Koehler, 2006). An instinctive grasp of teaching topic, along with appropriate pedagogical methods and technologies, lies at the crossroads of these three areas of knowledge. The TPACK framework is comprised of seven distinct parts. Here are several ways to characterize them:

1. Pedagogical knowledge (PK): Pedagogical knowledge relates to the techniques and practices of teaching and encompasses understanding of classroom management, evaluation, lesson plan design, and student learning.
2. Technology knowledge (TK): is the understanding of various technologies, from low-tech technologies including paper and pencil to digital technologies like as desktop computer, internet connection, laptop, monitor for projection/television, printer, projector, scanner, speaker, tablet, etc.
3. Content knowledge (CK): is "knowledge of the actual subject matter to be learnt or taught" (Mishra & Koehler, 2006, p.1026). Teachers must understand the topic they will teach and how the nature of knowledge varies across subject areas.

4. Pedagogical content knowledge" (PCK): is used to describe information about a subject that is relevant to the art of teaching (Shulman, 1986). As a hybrid of subject matter expertise and pedagogical understanding, pedagogical content knowledge aims to improve classroom instruction across subject areas.
5. TCK, or technological content knowledge: is the understanding of how a given piece of technology can be used to generate alternative representations of a given piece of material. What this means is that educators have come to realize that they may influence their students' use of technology to improve their learning in a given subject area.
6. Technological pedagogical knowledge (TPK): is the familiarity with the ways in which various technologies might be applied to education and the awareness that this familiarity may lead to a shift in how instructors approach their craft.
7. When talking about instructors, "technical pedagogical content knowledge" (TPACK): is the term used to describe the expertise needed to effectively incorporate technology into lessons across all subject areas. By teaching content with the right pedagogical methods and technologies, teachers have an innate awareness of the complicated interplay of CK, PK, and TK.

When the TPACK framework was first introduced, it was found to have a significant effect on both traditional classroom instruction and the use of technology in schools (Ritzhaupt, Huggins-Manley, Ruggles & Wilson, 2016). Applications in the field are what make the TPACK framework so important (Levy, 2020). To aid in the incorporation of technology and to facilitate teachers' knowledge of how to teach using technology, the TPACK framework was developed as a conceptual framework (Angeli, Valanides & Christodoulou, 2016). Teachers' effectiveness can be enhanced by their familiarity with the ways in which technological tools might be integrated with established pedagogical practices and subject matter (Harris, Mishra, & Koehler, 2007). According to Koehler and Mishra (2008), knowing the TPACK structures can help educators tailor classes to their students' needs. The ability to "draw from relevant components of TPACK and synthesis them for a particular group of students with a particular emphasis on some content knowledge," as stated by Chai, Ching Shing, Ng, Li, Hong, and Koh (2013), is a key component of a strong TPACK foundation (p. 43). Drummond and Sweeney (2017) stated that the TPACK framework's ultimate purpose is to help teachers "better combine technology, teaching approaches, and specialized material in order to provide the most effective learning experience for students" (p. 930).

Online and On-site Learning

In the past, most education was delivered in a classroom setting. Brick and mortar education refers to classroom settings where teachers and students physically interact (Allen & Seaman, 2013). The benefits of having people around you to ask questions and get answers are a large part of why in-person education is so effective (Kassner, 2013). In a conventional classroom, students learn to communicate with their teachers and each other through their senses (Rockinson-Szapkiw & Wendt, 2015). Hopefully, many educators in traditional classroom settings are beginning to shift their focus away from themselves and toward their

students. Group projects and individual assignments are two examples of student-centered methods that are finding their way into the classroom (Morgan, Craig, Schütte, & Wagner, 2014). In place of the instructor being the exclusive source of information and authority, today's classrooms are becoming increasingly student-centered and team-based (Filsecker & Hickey, 2014). As a result, the traditional model of instruction based on a single, in-person meeting is giving way to one that makes greater use of internet and other technological resources for education (Davies, Powell & Nutley, 2015).

When compared to more conventional classroom settings, online education (also known as virtual learning or distance education) is a relatively recent development. Consequently, the literature contains some precedents (Banas & Emory, 1998). In the mid-1990s, universities began successfully implementing online education systems such as the SUNY Learning Network, the Illinois Virtual Campus, and the UMASS Online system (Moloney & Oakley, 2010). The number of students interested in participating in online education, either partially or wholly, has increased significantly in recent years (Borup, 2016). Ibáñez, et al. (2019) describe online learning as learning that takes place at a distance with the aid of electronic devices that require internet access, such as tablets, smartphones, laptops, and computers. Online education, as defined by Ally and Stauffer (2008), is the use of the internet to acquire access to resources; to engage with contents, teachers, and fellow students; and to gain aid in the learning process. Research shows that students and teachers both benefit from the greater adaptability of an online classroom (Lunt & Curran, 2010). Students can control their own learning schedules and tempos when they take classes online (Mao & Peck, 2013). Montrieux, Vanderlinde, Schellens, and De Marez, (2015) discovered that the usage of technology boosted the learning capacity among learners in a focus group study.

The broad adoption of new technologies has led to dramatic shifts in the way today's pupils acquire knowledge (Bozkurt et al., 2015). Numerous schools have launched multiple online programs with overwhelmingly positive responses from students (Fonolahi, Khan & Jokhan, 2014; Kauffman, 2015). However, it has been noted that online teachers need to put in more time and effort than traditional classroom teachers (Allen & Seaman, 2015). Researchers highlight certain basic distinctions between online and face-to-face teaching, despite the fact that both utilize similar content, methodologies, and approaches. Preliminary studies reveal that effective online teachers require the same qualities as traditional educators, such as the ability to communicate clearly and efficiently and to keep their classes well organized (McKenzie, Mims & Bennett, 2003). New research, however, has found conflicting evidence.

As Watson points out, an online teacher needs to be able to communicate effectively, manage their time well, identify their pupils' preferred learning styles, and modify their methods accordingly (Watson, 2008). Archambault argued that certified educators must be trained to teach online (Archambault, 2011). As the number of online learners continues to grow, so does the importance of developing innovative strategies for keeping all students actively involved in class. Anderson, Standerford, and Imdieke (2010) and Barrett (2010) conducted

in-depth case studies of three online teachers and concluded that online teaching calls for a different set of abilities than those used to foster a classroom community of learners. The research found that classroom activities that encourage student participation and a noticeable instructor presence during discussions and small groups helped facilitate this process (Anderson et al., 2010).

Class formats, material delivery, and student-teacher and peer dynamics often vary from one institution of higher learning to the next (Boling, Hough, Krinsky, Saleem & Stevens, 2012). Due to these variances, there is a demand for varied approaches to education (Desplaces, Blair & Salvaggio, 2015). Also, the onus of responsibility for learning shifts to the student in the absence of a physically present teacher (Mattei & Ennis, 2014; Harris, Ingle & Rutledge, 2014). Yet, many online courses led to as teacher-centered rather of student-focused (Tømte, Enochsson, Buskqvist & Kårstein, 2015) due to the lack of required training in using technological and pedagogical skills (Rienties, Brouwer & Lygo-Baker, 2013). The literature has long debated the relative merits of in-person and online instruction. The use of face-to-face education in a virtual classroom is supported by the findings of several studies (Oliver & Stallings, 2014).

There has been much discussion in the academic literature over whether or not online instruction can ever truly replace in-person instruction. Some academics have hypothesized that adapting face-to-face teaching methods for use in an online setting will have positive effects for student comprehension and retention (Oliver & Stallings, 2014). They argue that, with certain modifications, face-to-face pedagogical methods can successfully be applied to an online setting (Luscombe & Montgomery, 2016). On the other hand, some academics argue that the online instructor's function is distinct from that of a traditional classroom professor (Ko & Rossen, 2017). Teachers who provide lessons online must pay special attention to how much time is spent on each lesson, how effectively classroom management is implemented in a digital setting, and how well students are engaged through digital means of communication (Easton, 2003). The classroom should be reorganized to focus more on the needs of the students. They need to step outside of their comfort zone and take on more responsibility for students (Lee & Hannafin, 2016). In addition, online educators should have a solid grounding in the fundamentals of computers, including the ability to create and edit documents, as well as organize their work in files and folders (Keramati, Afshari-Mofrad, & Kamrani, 2011). When comparing the in-person classroom to the virtual one, there are also notable differences in the areas of communication and teamwork (Wendt & Rockinson-Szapkiw, 2015).

The capacity to motivate students, encourage independent study, demonstrate cooperative learning, and give immediate responses to student work are all factors that have been demonstrated to contribute to students' performance in online courses (Sun, 2014). Learners can now easily work together, share resources, publish ideas, develop blogs, and get feedback thanks to the various forms of technology that are already available (Hew & Cheung, 2013). There is a strong correlation between how confident teachers feel in their ability to teach

online and how they deal with the various obstacles that come with virtual classrooms (Martin, Budhrani & Wang, 2019).

Instruction during COVID-19

Because of the widespread dissemination of Coronavirus 2019 (COVID-19), the World Health Organization Emergency Committee declared a global health emergency condition in January of 2020. (Velavan & Meyer, 2020; Zhang et al., 2020; Sukirman, 2023). The worldwide spread of the COVID-19 virus has been declared an international emergency. The spread of this virus has devastating effects in many countries. Various facets of daily life, including schooling, have been impacted by the pandemic. All lessons were canceled and schools were closed in various zones (Moorhouse, 2020). Today, there is no viable alternative to education conducted entirely online. The educational system in Turkey was not an exception.

Vargo et al. (2021) found that during the COVID-19 epidemic, educators were the second largest group of digital technology users. Teacher preparation for virtual and hybrid learning environments included training in all facets of instruction, from instructional methodology to technology implementation to time management to parent engagement to discipline (Rasmitadila et al., 2020). There were several aspects that went into the implementation of virtual education, including teachers' and students' access to technology and the internet, their socioeconomic situation, their level of training and experience, institutional or state-level demands, and their stage of development (Tomasik et al., 2021). In a nationwide survey conducted during COVID-19, Tomasik et al. (2021) investigated the COVID-19 teaching techniques and perspectives of language educators from grades PreK-12 and higher education. Electronic responses were received from state, regional, and national associations, interest groups, relevant social media groups, and professional organizations. Since instructors' earlier experience with designed online teaching did not adequately prepare them for the context of education during a health crisis, teachers' first experience with virtual instruction was at a time and context that could not match scheduled virtual learning (Tomasik et al., 2021).

A quantitative study by Bailey and Lee (2020) used a snowball sampling method to investigate the potential advantages and disadvantages of providing online training to English language teachers who are native English speakers in South Korea. It was shown that teachers with less virtual teaching experience reported increased difficulties when teaching (Bailey & Lee, 2020). For inexperienced educators, the challenges of virtual instruction and other forms of computer-based instruction can be overwhelming (Bailey & Lee, 2020). Teachers who had never used a virtual learning environment were often clueless about the mechanics of communication and the range of possible activities (Bailey & Lee, 2020). Finally, thriving online educators emphasized the importance of teachers having the ability to organize, manage collaboration, develop appropriate activities, and select the optimal setting and tools for their students' needs (Bailey & Lee, 2020).

The above- mentioned research studies have shed some light on how some models were conducted and how English teachers integrated technology into their lessons. However, the aforementioned research reveals a number of significant pits, especially in the case of the unexpectedly widespread use of online education brought on by the COVID-19 pandemic. None of the preceding research looked into how existing TPACK knowledge of teachers affected their instruction during the COVID-19 epidemic. The purpose of this research was to address a knowledge gap in the literature by investigating instructors' reactions to the introduction of online English language instruction in Turkish universities. Successful online TPACK instruction for EFL students at Turkish universities is one possible result of this research.

RESEARCH METHOD

Participants

This study included only 42 female English as a Foreign Language (EFL) teachers from Istanbul University. Since there were more female than male 6 ones, the researcher found it more practical to focus on just one gender when collecting data. First year-students are eligible to take advantage of the university's general English courses. All of the instructors have advanced degrees in either English Language Teaching or English language and literature fields. The university provides four levels of general English instruction, from elementary (A1) to intermediate (B2), using the textbooks *Less is More* and *Full Circle*. The standard weekly face-to-face time for the program is 16 hours, but because to the pandemic, this increased to 20 hours in 2020 and 2021. The sample size for this investigation was calculated using the freeware package G*Power. With a power of 0.80 and a null hypothesis of no connection, a two-tailed test was conducted using a Correlation Bivariate normal model. In this case, the software's best guess was 29. However, 42 teachers took part in the survey. Only 36 people who started the survey actually finished it, hence these are the actual study participants in Table 1.

Table 1. *Demographic variables*

Age	Years of teaching	Eductional level	Gender
25 – 36	2 – 10	MA = 65%	Female
M = 31	M = 6	BA = 35%	Total P = 36

Questions about participants' demographic information included their highest level of education, the number of years they had spent teaching, whether or not they had received any formal online training, whether or not they had received any formal training on using Blackboard or Whiteboard, and the number of days they actually taught during COVID-19. The data was analyzed to see if there was a correlation between the variables and the teachers' opinions. We used nominal and ordinal scales later through the paper.

Instruments

In this study, a modified version of the TPACK questionnaire (Schmidt et al., 2009) was used. The survey was changed for this study by providing a copy to the survey's owner along with a description of the planned usage in order to receive his advice based on the survey's proposed usage. The survey was composed of three major parts and several sub-components. The first part of the questionnaire contained six demographic questions, including inquiries about the educational background and previous online teaching experience of the individuals. The second part of the survey consisted of two sub-sections, each including 28 Likert-scale items. The initial survey form that was designed to evaluate the instructors' TPACK knowledge in general had a few items modified so that they would be more relevant to the EFL setting. Likewise, the second sub-section including 28 Likert-scale items was changed to fit in the online EFL education context. This section of the survey examined the instructors' views of the performance of their online EFL instruction in the scope of the TPACK theoretical framework during COVID-19. The final question of this section uses a Likert scale with five points that range from strongly disagreeing to strongly agreeing. For each item response, a value between 1 and 5 is assigned, with 1 representing strong disagreement and 5 representing strong agreement.

In the survey's third section, respondents were given five free-form questions to answer. The researcher formulated those inquiries in order to get at the answers to the research queries. The questions were as follows: We want to know: (1) how you think online learning aided students in learning; (2) what you think is the main strength of your online teaching experience; (3) what you think is the main weakness of your online teaching experience; (4) what you think would make for a better online learning experience; and (5) what you think would make for a successful blended learning model of teaching.

Data Collection and Analysis

This mixed-method study used data collected from an online survey adapted from (Schmidt et al., 2009). The survey was adjusted for the current investigation. The survey's creator was emailed about it. The study's goals and the survey's tweaks were explained to the owner per his request. NCU's Qualtrics survey software was used to make the online version of the survey. There were three sections to the survey: general questions about the respondent's background, a series of Likert-scale items, and free-form comments. There was a 15-minute time limit on the survey. Two separate programs were used to examine the data. SPSS was used to examine the numeric and demographic information in the data. Two distinct phases of analysis were performed. At the outset, we used a descriptive analysis to learn more about the instructors and their TPACK expertise. In the second stage, we inferred how much prior TPACK knowledge teachers had and how much they actually used during the COVID-19 school year. The qualitative data was imported into NVivo for analysis by nodes and themes. All of the unanswered questions about the study's subject matter were answered by the results of the analysis. The pilot study and validity testing of the instrument used in this study can be found in (Miles et al., 2013). Educators at Istanbul

University Cerrahpasa ‘s Foreign Language School were the target audience for the survey. After hearing what they had to say, the survey was sent out to the group. Because of its origins in an original study by Schmidt et al. (2009), this survey has been shown to have a high degree of credibility (see Table 2).

Table 2. *Reliability of Scores Schmidt et al. (2009)*

TPACK Doman	Internal consistency (Alpha)
Technology Knowledge (TK)	.85
Content Knowledge (CK)/ Social Studies	.81
Pedagogy Knowledge (PK)	.86
Pedagogy Content Knowledge (PCK)	.86
Technological Pedagogical Knowledge (TPK)	.92
Technological Content Knowledge (TCK)	.85
Technological Pedagogical Content Knowledge (TPACK)	.88

All four criteria—confirmability, credibility, dependability, and transferability—were met in order to establish the data's trustworthiness. Data confirmability was ensured by maintaining respondent anonymity throughout the survey. Furthermore, using NVivo for analysis ensured that the data was credible. The direct import of data into NVivo ensured that no information was lost or altered during the transfer. The data was thoroughly read over to ensure its accuracy. They then created a system of codes and themes. For reproducibility, adequate sampling was preserved (Boddy, 2016). From a total of 48 faculty members, we were able to recruit a total of 36 participants for the study. The quantity of data collected likewise lent credence to the concept of transferability (Bloomberg & Volpe, 2018). To guarantee the reliability and validity of the results, triangulation was used (Maxwell, 2012). Since triangulation offered a variety of data sources, a mixed-method approach was adopted for this study (Anderson et al., 2007).

In addition, a statistical analysis was run to verify the assumptions of the bivariate coefficient correlational test. For the Pearson correlation analysis, it was necessary to check the validity of various hypotheses. For the sake of completeness, we exported data from Qualtrics to SPSS without intermediate steps. Both the instructors' overall TPACK and their TPACK during COVID-19 were included, and their assumptions were tested. The measurement level was one of the hypotheses that was examined. In this investigation, ordinal variables predominated. Depending on the specifics of the query, each answer was given a numeric value between one and five. Therefore, the assumption of the level of measurement for a Pearson correlation analysis could be made with respect to the variables used in this study. Instructors' TPACK and GTPACK were both subjected to tests of normality and absence of outliers during the COVID-19 study (DCTPACK). Testing the sample for a normally distributed mean is what the assumptions of normality of variables are all about. Since outliers can have a huge

impact on Pearson's r , or correlation coefficient, the assumption of their absence is also crucial. Numerous outliers were identified and eliminated.

In order to find an answer to the first research question, Table 3 was analyzed to see what percentage of teachers felt they successfully integrated various forms of pedagogy, technology, and content into their lessons. Table 4 also inquired as to the teachers' perceptions of the integration of course material, pedagogical strategies, and technological tools during COVID-19. In addition, NVivo was used for thematic analysis on the responses to open-ended questions to gain insight.

FINDINGS AND DISCUSSION

The results section is where you report the findings of your study based upon the methodology [or methodologies] you applied to gather information. The results section should state the findings of the research arranged in a logical sequence without bias or interpretation. A section describing results is particularly necessary if your paper includes data generated from your own research.

Effective performance using TPACK is reflected in a high score, as shown in Table 3. With 44.1% claiming "76% - 100%" and 46.1% claiming "51% - 75%," the vast majority of teachers are confident in their ability to integrate course material, pedagogical strategies, and technological tools into their lessons. In terms of TPACK, only 9.8% of teachers rate their own performance as "26%-50% effective," while none rate it as "25% or less effective."

Table 3. *Effectiveness of TPACK in Teaching in General*

Effectiveness of TPACK in Teaching in General	Frequency	Percent
25% or less	0	0.0
26% - 50%	4	9.8
51% - 75%	15	46.1
76% - 100%	17	44.1
Total	36	100

In contrast to Table 3, Table 4 reveals that a lesser number of EFL teachers who participated in this research felt they successfully combined TPACK during COVID-19. Despite this, the majority of respondents, between 37.2% and 45.4%, nevertheless believe that they performed over 52% of the expected level.

Table 4. *Effectiveness of TPACK in Teaching during COVID-19*

Effectiveness of TPACK in Teaching in General	Frequency	Percent
25% or less	0	0.0

26% - 50%	6	17.4
51% - 75%	18	45.4
76% - 100%	12	37.2
Total	36	100

In addition, the results of the qualitative study showed the same pattern. Many of the instructors' responses to open-ended questions displayed a generally upbeat and optimistic attitude. The numerous ways in which teachers thought that pupils would benefit from participating in online learning were categorized under four primary topics. As can be seen in Table 5, these themes include overall favorable experiences, improving students' autonomy, boosting students' motivation, and making effective use of technology. In the following sections, we will delve deeper into each of these topics.

Table 5. *Emergent Themes for Effectiveness of TPACK in Teaching*

Emergent Themes
Overall Positive Experiences
Increasing Students' Autonomy
Boosting Students' Motivation
Effective Use of Technology
Total

Overall positive experiences

Online education has been shown to be effective, as one teacher put it, while another agreed, saying that it benefited their students much. With a variety of teaching strategies at my disposal, I am able to adapt my lessons to each student's individual needs and interests, one teacher explained. One educator went as far as saying they found their pupils' motivation to learn increased thanks to the psychological benefits of online courses. She claims that:

They found that using mobile or smart gadgets to learn improved their learning process and helped students overcome their anxiety about learning in a classroom setting. Students' stress and worry levels dropped when they were able to study in an atmosphere that met their needs.

The high proportion of success seen in Table 4 during COVID-19 was also partially explained by the perspective of one of the instructors. She gave an example to prove her point:

Although I have always been more certain that classroom instruction is superior, this past year has shown me that online education, particularly for college-aged students, may be quite beneficial. The opposite is true; there are numerous benefits to using it.

However, the COVID-19 situation provided a unique chance for those teachers who had never taught online before to test their mettle in the face of an unexpected challenge. The teachers that felt empowered to share their successes said things like, "I was able to employ many new tactics and I particularly loved the numerous applications that were accessible to increase kids learning and help them enjoy the topic." Others shared their thoughts, saying things like, "my job as a facilitator has developed by depending more on technological tools" or "I was able to employ task-based method and range of techniques and technology to satisfy diverse learning styles." One learner thought that "online teaching helps instructors to perform at her best and use all new, creative methods of teaching, which gradually raises the self-development bar for the institute," while another teacher thought that "online teaching allows us to use a task-based approach and a wide range of pedagogical tools to accommodate students with a wide range of learning preferences."

Students' Autonomy

Twenty-one sources were analyzed to determine the effect of *online* education on student autonomy. Teachers reported that the virtual environment aided students in becoming self-directed learners and enabled them to cultivate self-monitoring aptitudes, such as time and effort management. Additionally, some educators found that online learning enhanced students' autonomy, improving their exposure to the written part of the language, and encouraging them to take responsibility for their education. One teacher attested that students are now more independent and their independent learning is proving to be more productive due to online learning.

Boosting Motivation

Motivational enhancement. Thirteen sources were coded to determine whether or not they discussed the motivational benefits of online learning. Professors are of the opinion that their pupils benefited from online education. Teachers found that their students were "extremely enthused about online education," despite the novelty of the experience. A different educator also noted that "students were determined to complete their course effectively and put forth additional effort." Still another educator provided a detailed account of her class's efforts, saying:

All of my students viewed online education favorably. They respond quickly when I upload assignments on Blackboard or other apps used in class, and they arrive on time to class, just use chat box, discuss, and make suggestions with their mics on.

Effective use of Technology

In this study, participants coded seven sources to determine how successful technology is at improving students' academic outcomes. According to the participants, "using mobile or smart gadgets for learning purposes boosted their learning process and helped them overcome their anxiety of face-to-face learning." Another educator shared her thoughts on the efficiency of online education by saying:

Students gained the skills necessary to make efficient use of technological resources; now they can find additional opportunities to practice outside of class. Allowing people to take part in the forum and chat room available online.

Even among educators, there was a generally positive response to the medium. They believed that Blackboard and the available resources contributed to their success as educators. An educator explains:

The Blackboard system is really effective. You'll have no trouble figuring it out. Students receive the same education they would receive in a traditional classroom setting. As far as I'm concerned, online courses were effective. It was a useful tool for education.

However, it is important to note that, despite the instructors' optimistic general attitude, a negative pattern was also noticed in their responses. One's unfamiliarity with online education was emphasized. As one educator put it, "I'm very visual, and it was really hard for me at the beginning to have a face to face encounters but we are getting used to it." One educator argued that "physical lessons had more strength" than virtual ones. We need to connect with students," another educator added. The proper message needs to be delivered in the right way, and that can only be done through face-to-face instruction. Teachers have cited the inability to follow up with pupils and the lack of body language as two disadvantages of online instruction. As one educator put it, "I missed the body language that helped me a lot in understanding students' understanding" when teaching online, and another noted that "many students are not engaged, and sometimes it is quite difficult to follow up with everyone." Still other educators vented their outrage, stating things like:

Absence of physical contact can be frustrating at times. Often times, I have no idea if my class has grasped the material. Body language and expressions convey a lot of information in a traditional classroom setting. I prefer to instruct through images. By keeping my eyes on the person and paying attention to their body language, I can decipher what they are trying to say. Inability to interact with my beloved students is frustrating.

As one instructor put it, "I believe it necessitates time to be accustomed with the condition," while another participant lauded the "ability to cope with online teaching and the flexible curriculum that we could move very rapidly into online" as a benefit of the rapid shift.

All sections of the survey were evaluated for a correlation between teachers' general knowledge and their teaching experience during COVID-19. SPSS was used to tabulate the data and organize the 26 questions asked throughout the two sections of the survey into the categories shown (TK (Technological Knowledge), CK (Content Knowledge), PK (Pedagogical Knowledge), PCK (Pedagogical Content Knowledge), TCK (Technological Content Knowledge), TPK (Technological Pedagogical Knowledge), and TPACK (Technological Pedagogical and Content Knowledge)). An application of Transform, Compute Variables was used for this purpose. There was a comparison made between instructors' reported levels of general knowledge across all categories and their actual levels of experience during the COVID-19. In fact, this was an attempt to respond to the second research question that Table 6 offers descriptive statistics and the association between all characteristics of teachers' general knowledge and their actual experience during COVID-19.

Table 6. *Statistical Descriptions of General and COVID-19 TPACK*

	Mean	Std. Deviation	N
General TPACK	108.9801	7.67935	36
During COVID-19 TPACK	101.5760	11.21386	36

The Pearson product-moment correlation coefficient was also used to help shed light on the second research question. Table 7 shows that there was a significant optimistic correlation at the 0.01 level between the overall TPACK of EFL teachers and their TPACK during COVID-19 ($r = .586$, $n = 36$, $p = .001$).

Table 7. *Significant optimistic correlation at the 0.01 level*

During COVID-19 TPACK		
During COVID-19 TPACK	Pearson correlation	.586**
	Sig. (2- Tailed)	<.001
	N	36

As a result, the hypothesis that EFL online teaching success is correlated with teachers' levels of expertise in content, pedagogy, and technology was disproved. In contrast, findings suggest that teachers' perceptions of the success of their online EFL instruction are significantly related to their level of expertise in pedagogy, technology, and subject matter.

CONCLUSION

The purpose of this qualitative study was to investigate how well using online learning to teach English as a foreign language (EFL) at the Foreign Language School at Istanbul University, Cerrahpasa in Turkey during COVID-19

worked for the students enrolled in the program. The sudden shift from in-person to online EFL instruction due to the rapid spread of COVID-19 was the focus of this research. This research filled a knowledge gap in the literature by investigating teachers' reactions to the introduction of e-learning for English as a Foreign Language (EFL) in Turkey's higher education system during the recent pandemic. A revised online survey measuring teachers' TPACK (Technological, Pedagogical, and Content Knowledge) was used to probe their perspectives (Schmidt et al., 2009). Roughly nine in ten of the participants gave their general TPACK knowledge a rating of 51% or higher or higher, with none of them placing it lower than 25%. In a similar vein, eighty percent of the people who took part in this study have the opinion that their TPACK during COVID-19 efficacy was over 51 percent, and none of them rated the effectiveness of their performance as being below 25 percent. Studies that were looked at in the past and found to have similar findings to this positive perception are Bingimlas (2018), Gungoren and Horzum (2015), Khine (2015), and Tondeur et al. (2016). In this context, a few themes arose dealing with the autonomy of the students, the motivation of the students, and the application of technology. Learners, according to those who took part in this study, had the opportunity to become more self-reliant and engaged as a result of their participation in online activities. It was discovered that learners who participated in online learning had a higher level of motivation to study. These findings are congruent with those given in other studies that dealt with the effect of incorporating technology into educational practices (Imbriale, Schiner & Elmerndorf, 2017).

On the other hand, it is essential to emphasize that a number of instructors have reported having difficulties due to their lack of familiarity with online instruction. The abrupt change was frustrating and uncomfortable for those teachers since it caused confusion. According to Kassner (2013), Scheg (2014), Tschida (2014), and Wendt and Rockinson-Szapkiw (2015), the absence of face-to-face interaction was unable to be surmounted as a barrier.

Regarding the second question, we discovered that there is a relationship that is statistically significant between instructors' content, pedagogical, and technological knowledge and their views on the success of their EFL online teaching, with a correlation of $r = .586$, a sample size of $n = 36$, and a significance level of $p = .001$. Further, the present study's findings are consistent with those of a previous qualitative study conducted by (Rufai, Alebious & Adeakin, 2015). According to the research presented here, students have more freedom in their schedules to participate in virtual classrooms despite the absence of face-to-face instruction. An online course can also be learner-centered if the instructor is able to create an encouraging classroom environment that motivates students to study. The study also aimed to determine the level of self-assurance that EFL instructors had in developing, delivering, evaluating, and coordinating online courses. This inquiry probed educators' abilities to coordinate online course goals, unit-level syllabi, student work, and assessments with student performance. However, when a teacher's synchronization of an online course is appropriate, as Kirtman (2009) noted, students acquire the same knowledge regardless of whether the session is held in-person or online. Francis and Oluwatoyin (2019) found that when teachers improved their varied technology abilities, online classroom administration

became easier and the class atmosphere became cooler. As was noted, educators may consider the use of technology as advantageous when it results in increased productivity and social influence as well as stimulates improvements in instructional practices. However, the findings showed that both students and instructors need to enhance their level of digital literacy and the way they interact with technology in order to make it easier to manage online classrooms.

CONCLUSION

The Turkish coronavirus epidemic caused a shift in the traditional methods of teaching, hence the purpose of this study was to investigate how teachers at a higher education institution in Turkey perceived the use of online English as a foreign language (EFL) training. In addition to this, it investigated the challenges that EFL teachers encountered during the COVID-19 epidemic as well as their suggestions for improving the quality of the online EFL teaching experience. According to the participants in this study, the online experience provided learners with the opportunity to become more active and independent learners. [Citation needed] It was discovered that learners' motivation to learn increased when they used online learning. In addition, the Pearson product-moment correlation coefficient analysis reveals a positive relationship between instructors' content knowledge, pedagogical knowledge, and technological knowledge, as well as their views on the success of their EFL online teaching. This relationship is statistically significant. The provision of training for instructors, the requirement for adequate technical support, the activation of Blackboard's additional features, and the availability of a flexible class setting and assessment system are the primary focuses of the recommendations made for a more productive online experience. In conclusion, recommendations for future research were presented. These recommendations included conducting studies using experimental designs, including a larger number of participants hailing from a variety of educational institutions and varying levels, and looking into the nature of the recommended courses and assessment strategies. The issue that comes with putting TPACK theory into practice may be seen in the classroom of the different fields. There were some instructors who were unable to successfully present the course while incorporating technology. It is strongly advised that the institution's students as well as its instructors and staff participate in ongoing training. Due to the rapid progression of technology, the knowledge that people gain today will soon be considered ancient. If educators only concentrate on acquiring technological knowledge, they will fall further behind. Learning about technology should consistently include new information.

The global coronavirus pandemic triggered a change in traditional teaching practices, so the purpose of this study was to investigate how teachers at a higher education institution in Turkey perceived the use of online English as a Foreign Language (EFL) training. Additionally, it investigated the challenges EFL teachers encountered during the COVID-19 epidemic, as well as their suggestions for improving the quality of the online EFL teaching experience. According to the participants in this study, the online experience provided learners with the opportunity to become more active and independent learners [citation needed]. It was discovered that learners' motivation to learn increased when they used online

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