I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all the material and results that are not original to this work.

Name, Last Name: Melek Dönmez

Signature:

ABSTRACT

A VIDEO CASE STUDY ON TPACK INDICATORS IN TECHNOLOGY ENHANCED LANGUAGE TEACHING CLASSROOMS IN TURKEY

Dönmez, Melek

M. Sc., Department of Educational Sciences

Supervisor: Assist. Prof. Dr. Evrim Baran

June 2016, 133 pages

The purpose of the study is to identify indicators of English language teachers' technological pedagogical content knowledge (TPACK) observed in language teaching classrooms. The case study examined 5 different cases comprising of 5 different English language teachers as participants and 5 different technology enhanced language teaching classrooms using video study method. The data sources included semi-structured pre- and post-interviews and video recordings of lessons. The qualitative analysis of the video recordings and interviews demonstrated the reasons for the technology integration into language teaching environment and TPACK indicators as observed in the videos during instruction and interviews. Teachers' behavioral indicators displayed in the process

of lesson planning and actual teaching. The lesson planning included 4 categories listed as technology selection, curriculum planning, material preparation and assessment planning. The actual teaching process consisted 5 main categories identified as lesson entry behaviors, technological teaching strategies in ELT, technology enhanced classroom management, troubleshooting with technological problems and technology based assessment. This study also introduced for future researches about representation and implementation of TPACK behavioral indicators in English language teaching classrooms.

Keywords: Technological Pedagogical Content Knowledge in ELT, Technological Pedagogical Content Knowledge indicators, video case study

ÖZ

TÜRKİYE'DEKİ TEKNOLOJİ DESTEKLİ DİL ÖĞRETİMİ SINIFLARINDA GÖZLENEBİLİR TPAB GÖSTERGELERİ ÜZERİNE VİDEO DURUM ÇALIŞMASI

Dönmez, Melek

Yüksek Lisans: Eğitim Bilimleri Bölümü

Danışman: Yrd. Doç. Dr. Evrim Baran

Haziran 2016, 133 sayfa

Bu çalışmanın amacı, Türkiye'deki bir okulda teknoloji entegre edilmiş dil öğretim sınıflarının gözlenmesine dayanarak, İngilizce öğretmenlerinin teknolojik pedagojik alan bilgileri (TPAB) gözlenebilir göstergelerinin belirlenmesidir. Araştırma deseni aktif çalışan İngiliz dili öğretmenlerinin teknoloji kullanımı video kayıtlarına dayanarak belirli bir çerçeve içerisinde derinlemesine bir araştırma yapmak için durum çalışması olarak belirlenmiştir. Çalışma 5 farklı İngilizce öğretmenini katılımcı ve 5 farklı teknoloji destekli sınıf ortamını içeren 5 farklı durum içermektedir. Veriler yarı yapılandırılmış video öncesi ve video sonrası

görüşmelerle ve sınıf ortamlarının video kayıt altına alınması yoluyla toplanmıştır. Hem video verileri hem de görüşme verileri için nitel veri analizi yapılmıştır. Veri analizi sonunda, çalışmanın sonuçları öğretmenlerin açıklamalarına dayanarak İngilizce öğretmenlerinin teknolojiyi dil öğretimi sınıf ortamlarına entegre etmelerinin sebeplerini ortaya çıkarmış, öğretmenlerin teknolojiyi dil öğretim ortamına nasıl entegre ettikleri süreci göstermek için bir dizayn tasarımı oluşturulmuş ve İngilizce öğretmenlerinin gözlenebilir TPAB göstergeleri video kayıt verilerindeki öğretmen hareketleri ve görüşmelerdeki çıkarımlara dayanarak belirlenmiştir. Bu tasarım temel olarak öğretim planlaması ve aktif öğretim kısımları olarak ikiye ayrılır. Öğretim planlaması öğretmenlerin teknoloji destekli öğretimlerinden önce yaptıkları hazırlık sürecini sergilemektedir ve teknoloji seçimi, programın planlanması, materyallerin hazırlanması ve değerlendirmenin planlanması olmak üzere 4 kategoriden oluşmaktadır. Aktif öğretim kısmı ise derse giriş becerileri, teknoloji destekli öğretme stratejileri, teknoloji destekli sınıf yönetimi, teknolojik problemlerle başa çıkma ve teknoloji destekli değerlendirme olmak üzere 5 ana kategoriden oluşmaktadır. Bu çalışma İngiliz dili öğretim sınıflarındaki TPAB göstergeleri daha sonraki çalışmalar için örnek teşkil etmektedir.

Anahtar Kelimeler: İngiliz dili öğretiminde Teknolojik Pedagojik Alan Bilgisi, Teknolojik Pedagojik Alan Bilgisi göstergeleri, video durum çalışması

To my cousin

Hamit Yıldız (sleep in peace),

To my love

Ahmet Yapucuoğlu

and

To my family,

Polat, Nebahat, Hilal, Salih Dönmez

ACKNOWLEDGMENTS

First of all, I would like to extend my thanks to especially my thesis supervisor Assist. Prof. Dr. Evrim BARAN for her contributions to my thesis process. I would like to say to be grateful with her professional support, endless motivation and her confidence in me. In this my difficult and long process, I always met her encouragements and guidance all time. I always felt that her supports and precious opinions were with me all time. I also would like to thank her for sparing valued time with my various questions and me.

I also want to thank warmly my committee members Assist. Prof. Dr. Duygun GÖKTÜRK and Assist. Prof. Dr. Derya BOZDOĞAN for their guidance, precious suggestions and participations to put last touches in my thesis.

In this process, I would like to give special thanks to Prof. Dr. Ahmet OK for his emboldening, motivation and indulgence to continue my process and sharing his invaluable experiences with me. I am also thankful for Prof. Dr. Cennet ENGİN DEMİR for her understanding and support through my thesis process. I also thank for Prof. Dr. Mustafa Levent İNCE for his helps, his assistance and his advises for my thesis.

I want to express my special thanks and gratitude to technology coordinator Hazar BOZ and assistant technology coordinator Nuray ÖZMEN for their contributions and benefits on my data collection process, I am very helpful to come across with you. And I am also thankful to the school manager Gökhan TANKAŞ and eximious English teachers for their participation and support in my thesis study. Your opinions and sharings were very helpful and special to me.

I am especially grateful and present my thanks to my roommates Sevgi KAYA KAŞIKÇI and Halil Han AKTAŞ for their whole supports and motivations.

They are precious for me. I also would like to special thanks to my dear friend and sidekick Ceren OCAK. She did not live me alone in this difficult process and provide her full support. I am very grateful to have a friend like you.

I also would like to thank my friends, Hatice ÇİLSALAR, Seher ÇEVİKBAŞ, Özlem Fatma YILDIRIM TAŞTI and Elanur YILMAZ for standing with me in this process and not refraining their supports. I am also thankful Başak ÇALIK for providing her support and helpfulness. I am thankful for my dear friend Alev ELMALI ÖZSARAY for her encouragement and helps because of sparing her precious time with me. And I want to thank to Nevin KAHRAMAN for her greets.

Of course, I am happy to have a beloved family like you. All of you are very precious for my life and me. Firstly, I thank to my dear father and mother, Polat and Nebahat DÖNMEZ for their endless belief, guidance and reinforcement to be successful through my life. Their all existence is treasure for me all time and through my life. I am also very grateful my dear sister Hilal DÖNMEZ for her helps in my thesis process, without you I feel lost, and my dear brother Salih Polat DÖNMEZ, I feel very lucky to have siblings like you.

Lastly, I am very grateful to meet and be acquainted with you in my life. I am thankful to my precious love Ahmet YAPUCUOĞLU for his endless love. I would like to thank you for your patience, support, motivation, guidance and confidence in me. I extend my special thanks also my love for being and sharing your life with me in this hard, tiring process and though your life. *Thank You.*

TABLE OF CONTENTS

LIST OF TABLES

TABLES

LIST OF FIGURES

FIGURES

LIST OF ABBREVIATIONS

CALL	Computer Assisted Language Learning
ELT	English Language Teaching
FATIH	Movement to Increase Opportunities and Technology (Fırsatları Artırma ve Teknolojiyi İyileştirme Hareketi)
MoNE	Ministry of National Education
NEC	National Education Council
PCK	Pedagogical Content Knowledge
STOYS	Service Based School Management System (Servis Tabanlı Okul Yönetim Sistemi)
TIMMS	Third International Mathematics and Science Study
TPACK	Technological Pedagogical Content Knowledge
YLP	Your Learning Place

CHAPTER 1

INTRODUCTION

1.1. Background of the Study

Day by day, learning a second language gains importance, Ministry of National Education (MoNE) started to teach students English from 2nd to 12th grade in Turkey (2013). English language teaching (ELT) comprises a wide broad for both teachers and learners. In the English language teaching classrooms both the teachers and students make great efforts for fluent language development and effective language learning. The context of the language teaching classroom is important to develop language skills.

Depending on technological and educational developments, the integration of technology should be considered as a general issue by the authorities and educational policies, rather than individual duty of teachers (Tondeur, Keer, Braak & Valcke, 2008). Teachers can provide and enrich language learning environment by emergent technology use in their classrooms (Golonka, Bowles, Frank, Richardson & Freynik, 2014). In this context, in Turkey technology has begun to be used in all classroom settings with the FATIH project (Movement to Increase Opportunities and Technology) with the integration of new and updated technologies to increase students and teachers' use of technology (MoNE, 2012). Schools not only public but also private ones adopt technological learning tools intensively in their classroom environments included in national and educational school policies.

In changing modern-day, usage of particular computer based teaching methods and different teaching techniques gain importance in English language teaching environment. As Summak, Bağlıbel and Samancıoğlu (2010) indicate new developments in technology as computers and internet connections provide new

possibilities for learning and teaching environment. Usage of the technology in the classroom environment or not is no longer a discussion, however a new debate springs up among scholars on how the teacher can use technology in teaching effectively and which new technologies are appropriate to use in learning environment (Angeli & Valanides, 2009). After the integration of technology in classrooms, it is noticed that the using technology into classroom is not enough to integrate technology effectively for creating effective teaching environment (Mishra & Kohler, 2006). Technology integration into learning environment has different constituents more than just using technology in classroom.

The technology integration into classroom environment brings about the necessity of building an exhaustive theoretical framework. Mishra and Koehler (2006) verbalized the theoretical framework as 'technological pedagogical content knowledge (TPACK)'. Fryling (2013) has summarized TPACK framework as combining technology with teacher knowledge, content and pedagogy and their compounding as pedagogical content (PCK), technological content (TCK) and technological pedagogical content (TPK). Briefly, this framework identifies interactions between technology, pedagogy and content knowledge. TPACK framework helps examine teachers' using technology in classroom environments. Researchers worldwide has begun to understand and explain the TPACK framework composing of complex and multi-faces concepts (Koehler, Mishra & Yahya, 2007; Guzey & Roehrig, 2009; Rienties, Brouwer & Lygo-Baker, 2013). The TPACK framework has become to be examined and identified in different environments with many research studies.

While TPACK gained a worldwide popularity, researchers reflected to clarify the difficulty of definition of this framework. For instance, Graham (2011) stated as 'fuzzy' that the deficiency of identifications of interactions and relations of the TPACK framework. The researchers should examine the TPACK components in a contextual environment. Graham (2011) also

mentioned about TPACK framework as handled in descriptive way rather than prescriptive. Similarly, Cox (2008) underlined the interaction between TPACK components. Representation of TPACK components was very difficult to define by separating technology integration process. The TPACK framework has become an interactional construct rather than individual descriptions. Students could learn in different ways with the help of enriched learning environments with technology integration, therefore teachers should change and vary their technology integration techniques in classroom environments in a contextual way (Rienties et al., 2013). In this way, the definitions of TPACK framework should be appropriate and 'sliding' because of changeable and emergent technology integrating into instruction process (Cox & Graham, 2009). After the clarification of these definitions, the TPACK framework elements began to be identified in different perspectives as a whole concept rather than distinct constructs. Therefore, examining the how the components of TPACK should be reflected in teacher practice has become an important research concern.

Research on TPACK mainly used teacher self-reports to examine teacher knowledge. Because of the TPACK indicators' representation by researches through surveys and interviews reported by teachers, the need has aroused to analyze real classroom environment depending on observations and real actions. The application of video study in real classroom environments has become a requirement. Video recording is a practical technological development to use in educational study environments. The video study had an important role on investigating teaching and learning role in the classroom environment from 1970s. (Brückmann et al., 2007). Stigler, Gonzales, Kwanaka, Knoll and Serrano (1999) reflected to use video study in educational researches named as Third International Mathematics and Science Study Video Study (TIMMS) in order to search out classroom teaching in country-based and to compare with other countries in 1995. Videos take place also commonly in language learning classes

as an instructional tool besides teacher education and analyzing the lesson. However, video study for examining TPACK behavioral indicators in English language classroom is relatively a new area and easier way to apply providing learners skillful and efficient examples (Savaş, 2012). Doering, Veletsianos, Scharber and Miller (2009) provide the data triangulation with different data collection tools in order to provide detailed information for the representation of TPACK framework into classrooms more clearly. This study includes video recordings to provide data more openly besides conducting interviews.

Technology integration into English language teaching classrooms has been a controversial issue because of various digitalized language teaching materials and increasing of their usage actively (Liu, Liu, Yu, Li & Wen, 2014). After the definition of TPACK framework, it has become a commonly used-term in language teaching. Liu et al. (2014) indicate that the components of TPACK framework are very different from other contents because of language teaching and learning not only including subject knowledge and pedagogical knowledge to blend with technological knowledge. ELT also consists of language skills and limitless sources of content. The development of TPACK for language learners should be systemically the same as for the teachers. Chien (2015) reflects that language teachers should integrate technology actively into their lessons and develop their TPACK skills for lesson planning, implementation and assessment parts to be more effective teachers.

Similarly, Gilakani (2012) articulates that while using technology in lesson process, language teachers should take into consideration of meeting learners' needs, managing with classrooms and selecting appropriate technology. Tai and Chuanh (2012) reveal various recommendations for the English language teachers, such as designing approaches, creating authentic teaching environment, joining workshop educations to develop TPACK competencies. In this way, examining teachers' TPACK indicators in language learning environments are crucial for

teachers to integrate technology in teaching environment actively and using integrated technology effectively within a plan for curriculum components and instruction process.

1.2. Purpose of the Study and Research Questions

The purpose of the study is to examine the reasons of English teachers' technology integration and their observed TPACK indicators in English language classrooms.

The below research questions will be explored;

1. What are the reasons of English teachers to integrate technology in English language teaching classrooms?
2. What are the indicators of English Language teachers TPACK in the lesson design processes in technology enhanced language teaching classrooms?
3. What are the indicators of English Language teachers' TPACK in actual teaching in technology enhanced language teaching classrooms?

1.3. Significance of the Study

Technology integration in the ELT environments demands a crucial role for English language teachers. As Golonka et al. (2014) indicate that language learning environments should be supported by new technological tools and materials in order to increase language development and interaction. In ELT classroom environments, the technology usage has been a matter of debate over decades. In Turkey FATIH project (Movement to Increase Opportunities and Technology) has been initiated to equip the classroom with new and updated interactive technologies to increase students and teachers' usage of technology (MoNE, 2012). As part of the project, most of the schools have equipped with smart boards and tablets in all of the schools. Similarly, many private schools have equipped their classrooms with technological tools to provide opportunities to their students to catch the innovations and technologies offered by the government to public schools. While

the schools have provided technological infrastructure, using these tools effectively have become even more important. Because teachers play a considerable role in their effective usage, examining the indicators of their effective technology integration warrants further research, particularly in technology enhanced ELT classrooms.

Because TPACK is a framework to examine teachers' effective technology integration knowledge, various quantitative and qualitative studies were conducted to examine teachers' TPACK in different contexts (Cox, 2008). In these studies, the researchers generally use surveys or interviews to determine the TPACK components separately. Baxter and Lederman (1999) note that researches have different methods to reveal teachers' PCK as 'surveys, concept mapping, lesson plan analysis, case scenario responses, interviews, video performance reflection, etc'. Similarly, TPACK researches use surveys, observations and interviews to analyze teachers' TPACK components (Jen, Yeh, Hsu, Wu & Chen, 2016). However, applied researches are very limited to examine teachers' TPACK in practice (Yeh, Lin, Hsu, Wu & Hwang, 2014). This study contributes to research using videos as a unique method for examining teachers' TPACK observed in classrooms.

Teachers use videos mainly as an instruction method for language learning classrooms generally. However, examining the classroom evidences of TPACK researches remain limited. Another important point is that the video study and its patterns for TPACK and English language learning classrooms to determine these evidences, how the researcher can apply the video study and how the researcher can specify these evidences in an effective way. Savaş (2012) underlines that the video study is influential on teacher education for examining the experiences and opinions of the teachers in a detailed way. For these important issues and lack of this type of study stated above, this study was a qualitative study with a video study for TPACK and in-service English language teachers.

1.4. Definition of Terms

The terms used in this study are identified clearly below as:

ELT: is used to define English Language Teaching, which refers to the teaching of English to learners whose mother tongue is different than English.

PCK: stands for pedagogical content knowledge defined as interactions of content and pedagogy to be used and organize the learning environment based on learners' abilities interests and blend specific topics and subject as Shulman indicated (1987).

TPACK: is used as an abbreviation of a framework, which is defined the intersections and relations of 'technological pedagogical content knowledge' by Kohler and Mishra (2006).

Technology Enhanced Classrooms: is used for identifying classrooms equipped by technological devices and materials such as smart boards, tablets, internet and online materials (e-book, games, activities etc.).

CHAPTER 2

LITERATURE REVIEW

2.1. Technology Integration in Learning and Teaching Environments

Katz reflects (2005) that using technology is inevitable and technology is everywhere in our lives and we become 'digital humanities' by courtesy of technology. Using technology has become part of our lives especially for the children. Technology usage has a crucial role as essential needs for many children; therefore, this situation reveals importance of teachers' knowledge and implementation of technology (Yangın Ersanlı, 2016). After prevalent usage of technology in schools, technology enhanced education transpires and the needs for both technological knowledge and pedagogy has taken place in classroom environments (Hockly, 2013). With the usage of technology, technology enhanced learning environments has begun to comprise and equip with various technological tools and devices. Different kinds of technology usage enrich the learning environment and the teachers both pre-service and in-service have to integrate and blend technology in their instruction within different ways (Mora, 2011). Using technology and interfusing instruction has become a trend in classroom environment.

The technology integration varies in line with different fields. According to Hilton (2006), in English language classrooms, the technology facilitates teaching environment by providing permanent learning with the help of presenting various language learning opportunities. Language learning environments cannot be just enriched with different activities and exercise, the technology also furnishes language learning environment with different authentic materials as audio and visual examples with interactive smart boards, online programs and platforms (Dudeney & Hockly, 2012). Lubis, Yunus and Embi (2010) emphasize that

technology usage is inconvertible because of gaining students' interest and motivation on language learning under favor of technological learning tools by representing resourceful and creative language teaching and learning environments. Liu, Moore, Graham and Lee (2002) mention that the computer or technology interactive classrooms support the teachers' pedagogical development depending on changeable technology besides the benefits of language learning of students in the technology enhanced language learning environments. The profits of using technology in language teaching environment can vary and be advantageous for developing language skills.

As far as technology integration provides numerous benefits for teaching and learning process, technology also could lead to arouse some problems into classroom environments. In the literature, the researchers also bring the necessity of technology integration in teaching up for discussion. Al-Bataineh and Brooks (2003) advocate that the effective integration of technology in learning environment depend on some essential conditions as educated teachers, relevant technological devices and qualified infrastructure; otherwise the technology integration create troubles more than profits for the development of learning. Although 21th century gives many technologic opportunities for education environment, Gülbahar (2007) suggests that the both school administrative and teachers should give attention on the selection of technological devices used in classroom environment properly to avoid problems stemming from technology and technology integration.

Besides the troubles and problems of technology integration and active usage process, the literature also discusses that the technology has not a significant role on the development of learning and teaching process. For example, Cuban reflects (2000) that the computer usage in classroom environment is not effective for both teachers' instruction process and students' learning process. The literature also raises a discussion that the ineffectiveness of technology usage in real classroom environments based on researches. Although many classrooms have

computers and defined as technology enhanced learning environments, seldom teachers use actively the computers in their instruction process (Zhu, 2003). Eteokleous's (2008) research supports the exist literature by emphasizing the rarely usage of ICT tools for instructional process. She also indicates that the technology usage in classrooms by students and teachers mainly depend on 'learning from' technological tools rather than 'learning with' technology. For language environment, Schmid (2008) mentiones that the usage of ICT tools in English language learning environment may cause 'cognitive overload' and 'lack of cognitive engagement'.

As a summary, it is clear that the effectiveness and necessity of the technology integration and the usage of technological tools in classroom environment is also a debate in the literature beside of active and efficient integration of technology.

2.2. The Technological Pedagogical Content Knowledge (TPACK) Framework

Technology integration is not a new issue for English language classrooms; it has been debated about for more than 30 years. The language learning classroom environments has begun to change and enhance with the development of technology. The English language education especially in our country is one of the controversial issues. Ministry of National Education (MoNE) (2013) has updated the English language curriculum, according to their new curricula in Turkey; the curriculum includes English language courses between 2nd and 12th level of students. It can be deduced also from attitude of MoNE through second language learning.

English language learning consists of a vital place in our education system. In language learning classrooms, new technologies take part with the FATIH Project (Movement to Increase Opportunities and Technology) after the 18th National Education Council (NEC) (Güven, 2012). After that, the usage of technology in the classroom gains importance and necessity in the classrooms.

Rodriguez-van Olphen (2002) reflects that the technology integration into the foreign language classroom furnishes the learning and teaching environment by culturally and linguistically profitable in the language learning classrooms. At these points, technology integration in the classroom environment becomes a common issue for both teachers and learners with the use of smart boards, tablets and internet instead of direct teacher and student instruction in our country.

Around the world, the technology integration and usage in the classrooms reveal the TPACK framework. Mishra and Kohler (2007) explain the TPACK framework by modeling in 2006. Thompson and Mishra clarify that TPACK framework was firstly used as TPCK; however, because of the difficulty of articulation, it evolved as TPACK for reason that the meaning of the anonyms of the letters as technology, pedagogy and content. TPACK framework consists three main concepts for teachers as content knowledge (C), pedagogical knowledge (P) and technological knowledge (T). The teacher also should have the pedagogical content knowledge basically (PCK), technological pedagogical knowledge (TPK) and technological content knowledge (TCK). Lastly, the technological pedagogical content knowledge comprises the overlap area is the main character (TPACK) (Mishra & Koehler, 2006).

As stated above, the TPACK framework is an important issue for teacher education and especially for language teachers. The technology should be integrated in the curriculum in an appropriate way for both learners and teachers to be used effectively in the classrooms. The Figure 2.1 identifies TPACK framework.

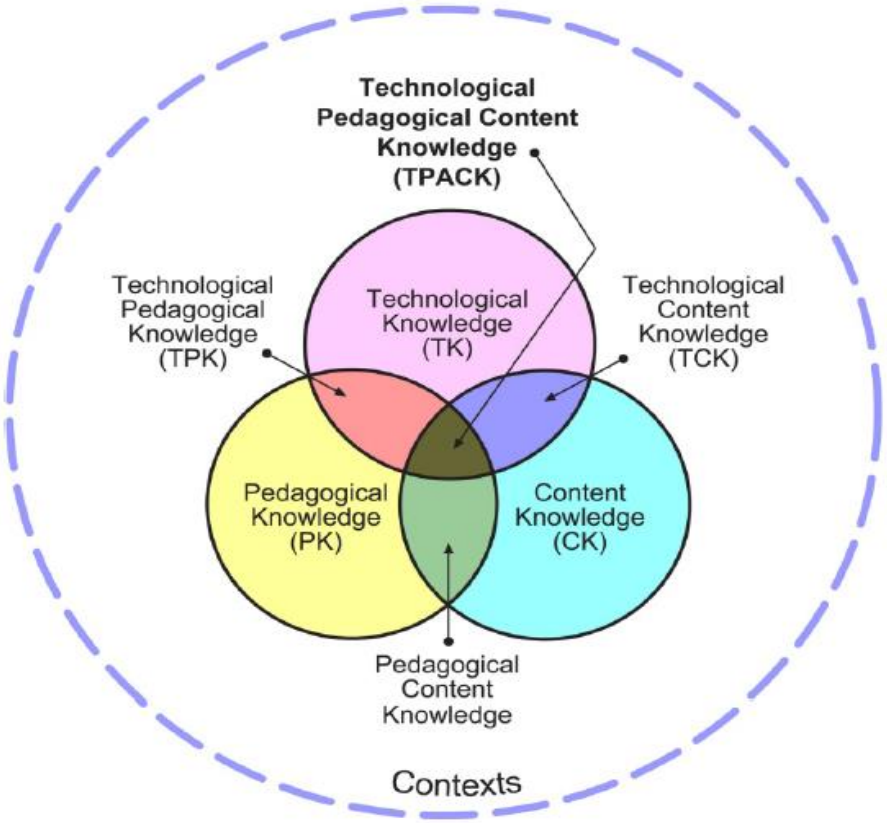

Figure 2. 1 Technological Pedagogical Content Knowledge (TPACK) Framework (Koehler & Mishra, 2006)

2.2.1. Transformative Approach to Identify TPACK Components

Examining the literature, two basic different perspectives define TPACK framework. The literature articulates these models as integrative and transformative model. Angeli and Valanides (2008) explain that the integrative TPACK model basis on Shulman's (1986) PCK model and compounding of content knowledge, pedagogical knowledge and technology knowledge used by teachers during instruction process. Angeli and Valanides (2009) articulate the integrative model as unclear and fuzzy because of including variety definitions of TPACK components. They emphasize the necessity of building a new theory. Because of changing information in this digitalized world, the transformation of

knowledge in instruction should be renewed with the use of different technological tools by taking teachers' TPACK framework in a contextual learning environment instead of separated definitions of components into account (Angeli & Valanides, 2009).

Although being many identifications and researches about TPACK framework as including TCK, PCK and their components (TK, CK & PK) in the literature, Graham (2011) suggested a theoretical model in order to remove unclear boundaries and clarify these components' relationships. The TPACK framework does not picturize only compounding of it is components as TPK, PCK and others, because technology integration process includes lesson design, curriculum and instruction integration with content in this technological learning environment (Niess, 2011). TPACK framework not only forms with just definition and examination of components, also the framework comprises more complex construct relations and interpenetrating elements.

The transformative depends on transformation and interaction of content knowledge, pedagogy knowledge and technology knowledge (Canbazoğlu Bilici, Guzey & Yamak, 2016). Kohler and Mishra (2007) review this discussion by mentioning the TPACK components are not under consideration as unrelated with each other and instruction taking place in context with not only integration of technological tools but also coping with all other constitutive and related elements. The TPACK components, clarified as content knowledge, technology knowledge and pedagogical knowledge, become to be defined as not unique unrelated ones, on the contrary Kohler and Mishra (2009) talk about TPACK within context in classroom environment is related to active, changeable and many-sided elements associating with technological instruction. Concordantly, the technology integrated lessons confer beyond TPACK components as separated skills and teaching (Kurt, Mishra & Koçoğlu, 2013). In other words,

TPACK framework evolves to be verbalized in a transformative form to identify its relations and structure.

2.2.2. TPACK Framework in English Language Teaching

TPACK is not an old term in our country especially for ELT classrooms. Graham (2011) advocates that the Pierson propounded term of TPACK firstly by through integrating content with the technology and the TPACK has become an issue since the last decade. Hughes and Scharber (2008) identify the TPACK framework in English language teaching calling as E(nglish)-TPACK built on Shulman's (1987) division as pedagogical knowledge, content knowledge and pedagogical content knowledge shown in Figure 2.2 below. They also indicate that the conceptual categories of E-TPACK are mainly related to TPK, TK and TCK developed and upgraded based on the changing technology integration process. Moreover, van Olphan (2008) underlines that TPACK framework furnishes the English language teachers by enriching language learning environments with the help of technology by providing cultural and linguistic classrooms.

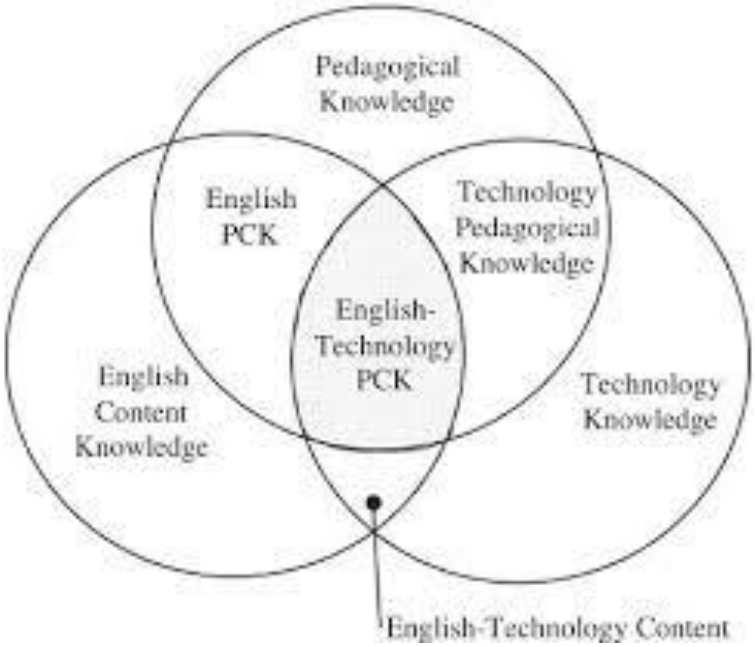

Figure 2. 2 English-Technology Pedagogical Content Knowledge (E-TPCK) (Hughes, 2000)

English language teaching is one of the specific areas that TPACK framework has important roles for both teachers and students in learning environment. The studies show that computer assisted language learning (CALL) summarizes enhanced and enriched language environments with the technological tools such as computers, internet connection and emergent technologies such as blogs, internet based games etc. (Golonka, Bowles, Frank, Richandson & Freynik, 2014). The interaction of pedagogy and content knowledge with technology is crucial for effective teaching. In the English language teaching classrooms, Yangın Ersanlı (2016) advocate that because of the changes in technology, it is inevitable for English language teachers to update their knowledge and obtain TPACK. Liu, Liu, Yu, Li and Wen (2014) also reflect that the technology enhanced classrooms provide authentic language learning environments for both teachers and students. Hereby, it is inconvertible that authentic teaching and environment is essential especially for language learning and the technology integration can create real-world target language environments in various ways.

2.3. TPACK Behavioral Indicators in ELT

In order to examine TPACK indicators, the researchers implement various methods, the most common ones are surveys or questionnaire items used to specify TPACK components. However, as Elmendorf and Song (2015) articulate because of evaluating technology and pedagogy components separately, the researchers have been forced to use different scales and studies to conduct and identify indicators of TPACK. They also state that the intersections of TPACK concepts are related to each other and these indicators should be observed in their contextual situations as including technology integration and interactions between students and teachers. In this way, Jen, Yeh, Hsu, Wu and Chen (2016) suggest the contextual usage of TPACK during instruction process to identify as TPACK practical and to determine how the teachers integrated technology in

action during instruction. When considering their TPACK-P definition, researchers provide to evaluate the TPACK indicators of teachers in the real classroom settings more clearly.

This study primarily looks for TPACK indicators in the technology integrated English language teaching classrooms. Different fields such as science, mathematics and language learning classrooms display various TPACK competencies (Öz, 2015). Therefore, the TPACK framework introduces to be evaluated in different environments represented in practical instructional process. For language teaching classroom environment, the technology selection and integration process is also different. For this reason, the crucial issue is to how to observe the characteristics of TPACK framework. Koçoğlu (2009) indicates that TPACK framework composes also teachers' awareness and knowledge to represent effective technology integration in language teaching classrooms. Tai and Chuang (2012) clarify the TPACK framework in practical instruction process as the competences demonstrated in five steps as (1) Modeling; (2) Analysis; (3) Demonstration; (4) Application; and (5) Reflection of TPACK elements.

Jang and Tsai (2012) reflected to observe the teachers' instructional properties' variety, presented in the learning and teaching environment in order to specify indicators of proficiency of teachers. The teachers exhibit different behavioral movements into integration of technology in their classrooms in different ways. When examining literature, the researchers have applied various studies to identify teachers TPACK development (Voogt, Fisser, Roblin, Pareja, Tondeur & van Braak, 2013), however the studies on English language teachers' knowledge of TPACK components and practical skills for technology integration process are very limited (Öz, 2015). Concordantly, Kaleli Yılmaz (2015) also articulate that the researchers conduct on TPACK in Turkey are mostly emphasized on quantitative studies and including pre-service teachers and these studies are far away from demonstrating practical usage of technology. She suggests for TPACK studies that researchers should use different data gathering tools as qualitative ones to strength findings; and select various and wide

participants for sample as in-service teachers to exhibit representation of active technology integration of teachers in classroom environments rather than explanation of perspectives though TPACK framework.

2.4. Video Studies in Learning Environment

Another crucial subject related to this study are video case studies. As Borko, Koellner, Jacobs and Seago (2011) indicate that the video studies gradually have become common in education researches specially to explaining interactions of teachers and students due to giving observable interactions of classroom settings. Using video is an important method in teacher education and helps to develop some instructional knowledge point of view of pedagogical knowledge of pre-service teachers (Seidel, Blomberg & Renkl, 2013). Masats and Dooly (2011) reflect that new approaches and up-to date resources as supplied by video studies should be integrated into the teacher education environment to indicate the new learning views holistically. In the literature, researchers implemented video studies in mathematics and science courses to provide pre-service and in-service teacher education generally.

The video- based studies provide some advantages for the teachers. In these studies, some implications reveal about significant differences between groups who watch their own videos or others; video-experienced teachers have advantage to noticing teaching and learning components and lastly video-experienced teachers in the own conditions have tendency to criticize their conditions more than other groups (Seidel, Stürmer, Blomberg, Kobarg & Schwindt, 2011). Based on these benefits, video studies redound different aspects to identify the school environment and interactions obviously.

Some video studies on pedagogical content knowledge (PCK) reveal students and teachers' relationships in the learning environments depending on observing active behaviors. Video case studies also reflect the comparison of

different classes and identification of classroom components based on the interaction between students and the teachers. Alanzo, Kobarg and Seidel reflect (2012) that teachers, students and real classroom environment could identify practical importance of PCK with video cases. Starting of this point of view, video cases studies are helpful to clarify active learning and teaching environment elements.

Video based study is not a new term for English language classes also. The instructors use videos generally for instructional purposes instead of using them for evaluation and comparison method. In literature, teachers mainly use videos as a lesson material and assessment material in English language classrooms. However, Coniam articulates (2001) that video studies are effective way for language learning environments to both present authentic material to students and tools to assess the development of skills for learners and also students.

In this study, the videos play a role to observe teachers' technology integration and actively technology use in real classroom environment. Derry et al. (2010) underline that the video studies demonstrate deep information for classroom environment and give objective viewpoint. On this basis, this study explains the ELT teachers' behavioral TPACK indicators by using video cases. Video recordings of teachers' actively technology usage in teaching environment indicate and identify the English language teachers' behavioral indicators of TPACK.

2.5. Summary of Literature Review

The literature demonstrates that the technology integration in ELT classroom environment is crucial issue. The TPACK framework has a complex structure and can be designated in different forms as integrative and transformative approaches. The transformative approach evaluates TPACK components in a contextual way by considering the relations and intersections of TPACK elements,

while integrative approach tries to identify these elements separately. Each department as English language teaching can identify TPACK framework based on their specific learning environment. The literature represents that different research methods can examine behavioral indicators of TPACK. One of them is video studies that provide deep information regarding real classroom environments and teacher actions.

CHAPTER 3

METHOD

3.1. Research Design

This study design was a case study to examine the indicators of ELT teachers' TPACK in classrooms. Creswell (2007) defined case study as "a qualitative research in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information e.g., observations, interviews, audial material, and documents and reports), a reports a case description and case themes" (p. 73). The design of the study was a case study approach because case studies helped to examine the specific subject from different perspectives (Creswell, 2007). Using case study design provided detailed and robust data to conduct a reliable study for investigating teachers' TPACK indicators in ELT classrooms. Video research method constructed and supported this study to collect data from video recordings of real classroom environments. As Knoblauch, Baer, Laurier, Petschke & Schnettler (2008) represented that the visual and video researches from pictures and films became an issue in social sciences in order to gather obvious, objective and deeper data from sample. The real actions and movements of teachers demonstrated the investigation of observable TPACK indicators of ELT classroom environment in technology enhanced classrooms with the help of video analysis.

3.2. Context of the Study

The context of the study acknowledged the study environment as selected and determined English language classrooms in a private school in Turkey equipped with smart boards and tablets. In Turkey, English language classes ranged

between 2nd and 12th grade levels in public schools. However, in this private school the language learning process began from pre-school education and continued till university. The classes equipped with smart boards, tablets and cloud educational applications and the English teachers integrating the technology in an effective way were selected.

3.2.1. The School Settings

The school was in a district in İstanbul. The school adapted "smart school" concept and developed their education with the help of technology. The school gave importance to English language learning in their all level of classrooms. In this school, the students could get training from pre-school to high school in the same campus. One of the main educational goal was to train students equipped with the emergent technology all their classes; and another important issue that the school policy based on intensely English language learning classrooms in every level of students. Besides the additional English courses, in the school had native speakers to reinforce English language learnings. The school improved technological substructure and adopted classes 'smart school' and 'cloud education' innovations. In every classroom, school had interactive smart boards having internet and tablet connectivity. Every student had a tablet or a computer connected with the smart boards and e-school equipment's like e-book, documents, homework applications and online platforms.

English language learning policy of this school was very crucial. The language learning training began in the pre-school with the native speaker teachers and continuous increasingly in other class of students with native speaker teachers and Turkish English language teachers. The school conducted the English language training with management and control of Cambridge Complete Solution School with the language learning agreement. As a part of this agreement every native and ELT teacher should get certificate of Cambridge Complete Solution School to work the subject private schools to provide students learn and use

English by listening, speaking reading and writing through the students' lives on their own. The goal of the school was not only to teach the English language but also to create authentic learning environments for English learning for students through their living experiences technology integration.

3.2.1.1. Lesson Materials in ELT Classrooms

The main material was the course book Eyes Open, provided by Cambridge University Press, used in this school both as hard copy and e-book by smart boards and tablets by the teachers and students. The teachers carried out lessons based on this course book and adding or removing some parts of the book. The book was uploaded on all smart boards and students' tablets in order to get through to book easily when need. The teachers also had different activities both online and hardcopy for students besides the main course book.

The usage of technology for the ELT classrooms was another issue that given importance by the school. In the school, besides e-book of course books, visual and audial materials, digital platforms, different programs and websites to use in the classroom and out of the classrooms like activities, games and homework on internet in order to provide language learning and sustain English learning out of the school. The school specified these digital platforms as "YLP" (Your Learning Place) used by teachers and students by logging in with the username and password. In this platform teachers could send the homework of students and received from them.

Another benefit of this platform was providing English language learning out of the school environment by animations, simulations and interactive books for grammar, vocabulary and skills. Another cloud program used by school was STOYS (Service Based School Management System). This program was 'on the cloud' program used as school management system. The school managers, teachers and students could use the program and all of the topics about the school as lesson programs, homework, activities, exams, absence and all another data

about school and students. Another platform for voluntary studies provided by teachers and school manager was Fundacion Pies Descalzos for students to join and motivate students. Beside all of these, teachers and students used various websites and programs specifically.

3.2.1.2. Classroom Settings

For the classroom settings, as mentioned above all level of the students had their own classes. The teachers went to the classrooms for students, the school did not have special field based classes for each course as English classroom, mathematic classroom or etc. An example picture of the classroom is given below in Figure 3.1.

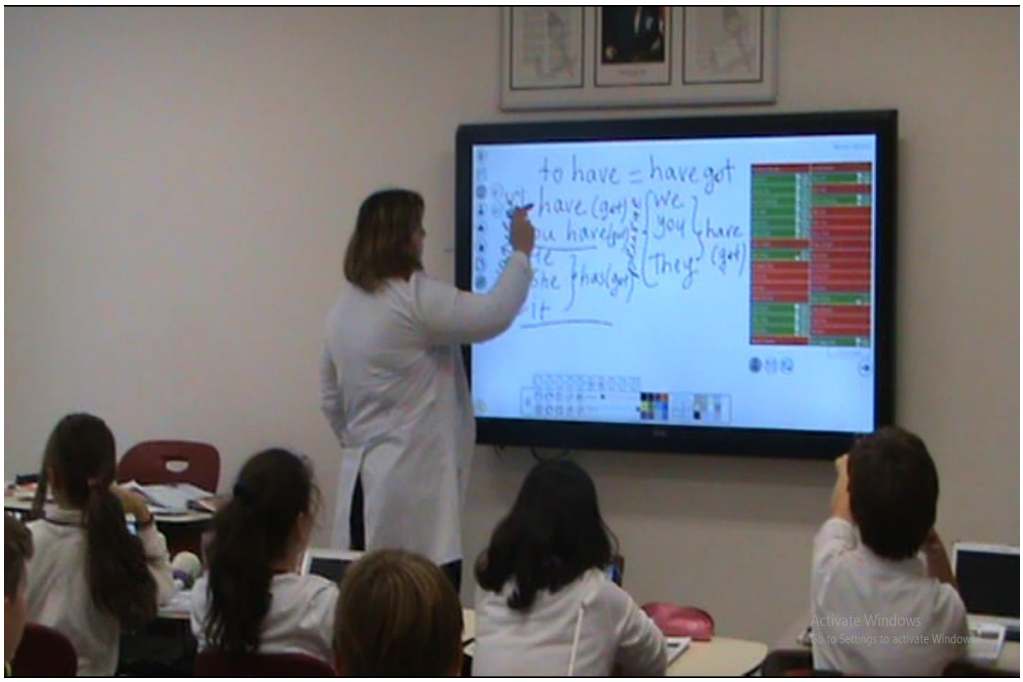

Figure 3. 1 Technology Enhanced English Language Classroom Setting

The school equipped all of the classrooms with smart boards. These boards included touch-operated screens. The classrooms did not have whiteboard near or on the smart boards. These boards also had internet connectivity only for boards

to be used by the teachers and mutual connection with the students' tablets. The school designed the classes as classic seating arrangement as the teacher manages the classroom; the smart board took placed in front of the students who sit alone and in line. The classrooms were not crowded; they were between 15 and 21 students in the video-recorded classrooms

This school was a unique one because of having interactive English language teaching on their classrooms with the adoption of 'smart school' perception by using technology as an educational policy. Moreover, this school gave much importance for English learning for all level of students with both native and Turkish English language teachers. The school policy also provided lifelong language learning with the help of technology for all students by different programs and platforms. Table 3.1 described the students' characteristics based on the teachers' definitions about the classroom with levels, classes, number and age of students.

Table 3. 1: *Distribution of Students in Grade Levels and Classrooms*

Level of students	Class of students	Number of students	Age of students
Beginner	4th	15	9 - 10 years
	5th	21	10 - 11 years
Elementary	5th	20	10- 11 years
	7th	18	12-13 years
Pre-intermediate	9th	21	14-15 years

Although the study's main participants were teachers, the teaching and learning process constitutes as a whole. In this reason, the study included the classroom environment and students' information in order to see all relations around the school and classroom. In this study totally 95 students were in the classrooms and these numbers changed between 15 and 21 students from class to class. The English language level of students was mainly as beginner, elementary

and pre-intermediate (n = 95). Students' class levels were specified as 4th, 5th, 7th and 9th classes.

3.2.2. Participants

This study was implemented during 2015- 2016 fall semester in a private school. The researcher used purposive sampling to collect related and useful data in specific units (Yin, 2009). As Yıldırım and Şimşek (2013) stated the sampling size could differ depending on the study's depth and width. Creswell (2007) suggested that in a case study the sampling should not exceed four or five participants in order to specify the themes of cases properly. The participants in this study were five English language teachers working in a private school in Turkey. The study examined five different classroom settings and four different class levels of students in their contexts. These teachers participated the study on voluntary basis to reflect level of students in the school. Other English language teachers working in this school were native or they studied in pre-school department. The teachers' professional experiences changed between 2 and 18 years. Table 3.2 described the demographic information of teachers.

Table 3. 2 : *Demographic Information of Participants*

Participant	Gender	Bachelor Degree	Teaching Experience	Videotaped Class
Sarah	F	English Literature	2 years	4th Class
John	M	ELT	6 years	9th Class
Mina	F	English Literature	3 years	7th Class
Laura	F	ELT	2 years	5th Class
Emmy	F	ELT	18 years	5th Class

The following paragraphs described volunteer teachers' characteristics taking part in the study. One of the teachers' participated study in high school with

9^{th} class students, another one was in primary education with 4^{th} students and other three teachers teach in secondary education department with 5^{th} and 7^{th} classes of students. Four females and a male teacher participated in the study (n = 5). The reason why the gender distribution was in this manner because of the school's teacher distribution.

3.3. Data Sources

Data sources included: (a) pre-video interview, (b) video gathering tools and (c) post-video interview. The semi-structured interviews named as pre and post video interviews were developed by the researcher based on the literature and related studies. After the questions developed, the researcher took expert opinions and made necessary editing with the suggestions of the experts. After the pilot study, pre-interview and post-interview forms aroused as the final form of interviews.

3.3.1. Pre-Video Interview

The first data collection was pre-video interview (Appendix A). The first part of the study was to collect data from the participants with the pre-video interview to collect preliminary information about the participant, the lesson and the students for videotaping. Pre-video interview included demographic information of the participants, basic information about the lesson being videotaped about the topic and process; and students' information of the classroom as level, age and classroom settings. Pre-interview form consisted four open-ended questions for getting demographic information. The pre-video interview had 14 questions to take information about the students and video recorded lesson process. The pre-video interview had totally 18 questions.

After identifying the voluntary participants of the study and planning the study timetable, the researcher informed the participants about the process. Before the video recording of the classroom, the researcher made pre-interview with the

teacher to get information about the demographic of teacher, the students and the lessons' process. The pre-interview was applied before the video recording. The pre-interviews duration ranged between 5.21 minutes and 10.28 minutes.

3.3.2. Video Recording Instruments

The main tool of the study was a video recording instrument. The researcher also collected data from the in-service English language teachers with video recording method in language teaching classrooms. The Video Recording Information Form (Appendix C) included some information about the classroom settings and instruction process. The researcher started to fill form in the beginning of the study depend on pre-interviews, and other parts of the study were video recording and lastly post-interviews were recorded to summary the process. The Figure 3.2 illustrated the video setting of the classroom.

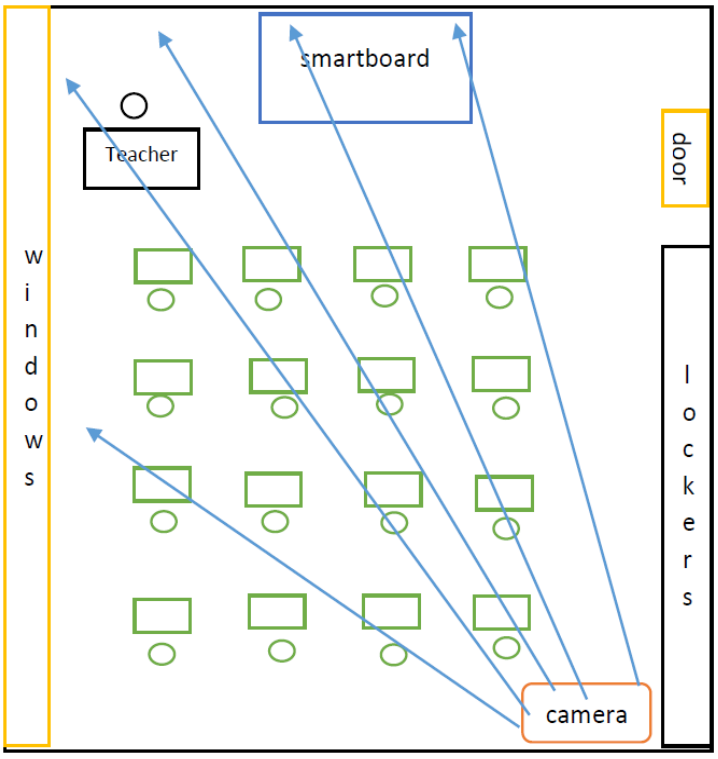

Figure 3. 2 Position of the Video Setting of Instruments in the Classroom

A video camera, placed on a tripod at the back corner of the classroom to see many of the students and the teacher actions, recorded videos in the lessons. As Erickson (2006) suggested that in video studies the camera editing should be the lowest level in order to catch not only ongoing relationships and movements but also not to disturb the participants. The researcher located next to camera to turn right and left with the teacher's movements around the classroom and to catch student activities through the recording while the camera recording.

The researcher recorded one lesson process of each participant. The duration of these video recordings ranged between 26.48 minutes and 35.12 minutes. Totally five video were recorded from lessons, one lesson process video recorded for each teacher.

3.3.3. Post-Video Interview

The last data collection tool was post-video interview (Appendix B). The post-video interview included five categories. The researcher filled first part of interview consisting of five questions about the information of video recorded lessons and participants depending on information from pre-video interview and video recorded lesson observations. Second part was about teacher's opinions for the videotaped lesson having one open-ended question.

Third part of the interview was about the differences of routine and video recorded lessons including two open ended and two structured questions to examine and clarify differences and similarities of video recording. Fourth part was about information on integrating technology in the classroom consisting five open-ended questions. The last part of the post-video interview included 17 open-ended questions in order to take information about the TPACK and the participant's point of view to technology consisting TPACK elements. The last part of the post-video interview questions was important to understand teachers' technology integration process before, during and after the instruction and clarify their TPACK indicators.

The post interview had totally 32 questions. The post-interview ranged between 15.11 minutes and 22.39 minutes.

3.4. Data Collection Procedure

3.4.1. Before Implementation

3.4.1.1. Pilot Study

After preparing the interview instruments, before the application of the study, the researcher implemented instruments and data collection tools for video as camera and tripod in order to check. The researcher arranged a public school in Ankara to conduct pilot study and test both interview tools and video recording instruments. This school had the smart board in their classroom environments. After an English teacher in this school agreed with participating the study, the researcher applied the pilot study. Firstly, the teacher answered the pre-video interview questions. Then the researcher video recorded the determined English lesson. Lastly, after the video recording of a lesson, the participant answered post-video interview questions.

In pilot study process, both the interview and video data were transcribed and analyzed. After the analysis of the interviews and video recordings, the researcher formed last version of pre and post-video interview questions in the light of pilot study. The researcher also checked the video recording tools also and decided how to place during the application of the study.

3.4.2. Implementation

To gather data, the researcher specified the school suitable for the study and talked with the school managers. After the researcher got in contact with technology coordinator of the school; and then with the help of technology coordinator met with teachers before data gathering in 2015 - 2016 fall semester. After the meeting, the researcher went to the school for a week every day for to collect data on the

school by interviewing with the teachers, videotaping the classrooms and observing the school and class environments with technology coordinator. For the first day, after meeting and informing both school and the managers, the researchers met with the teachers to explain the process and chose voluntary participants. After then with these teachers, the researcher formed a time-schedule to gather date for both interviews and videotaping with the teachers. The researcher prepared the data collection timeline and began to gather data the following data collection timeline demonstrated in Table 3.3.

Table 3. 3: *Data Collection Timeline*

Date	Activity
27.02.2016	Taking Approval of Ethics Committee
06.04.2016	Taking Approval of Ministry of Education
21.05.2015	Applying pilot study
02.11.2015	Meeting with the teachers and determining study schedule
03.11.2015	Observing the school environment, teachers, students and classrooms
04/06.11.2015	Teachers' pre-video interviews video recordings post-video interviews

In the study, three main data collection tools placed as pre-video interview of participants, video recordings of the classroom environment by integrating technology during instruction actively and post-video interview of the participants divided three parts through the study process. The video study had seven different mainly parts to clarify research process as designing the study process, applying pilot study, revision of the data collection tools, teachers' pre-video interview, video recording of the lessons, teachers' post-video interviews and analyzing of the

data. The Figure 3.3 picturized the whole design process of the video study research with a graphic illustration.

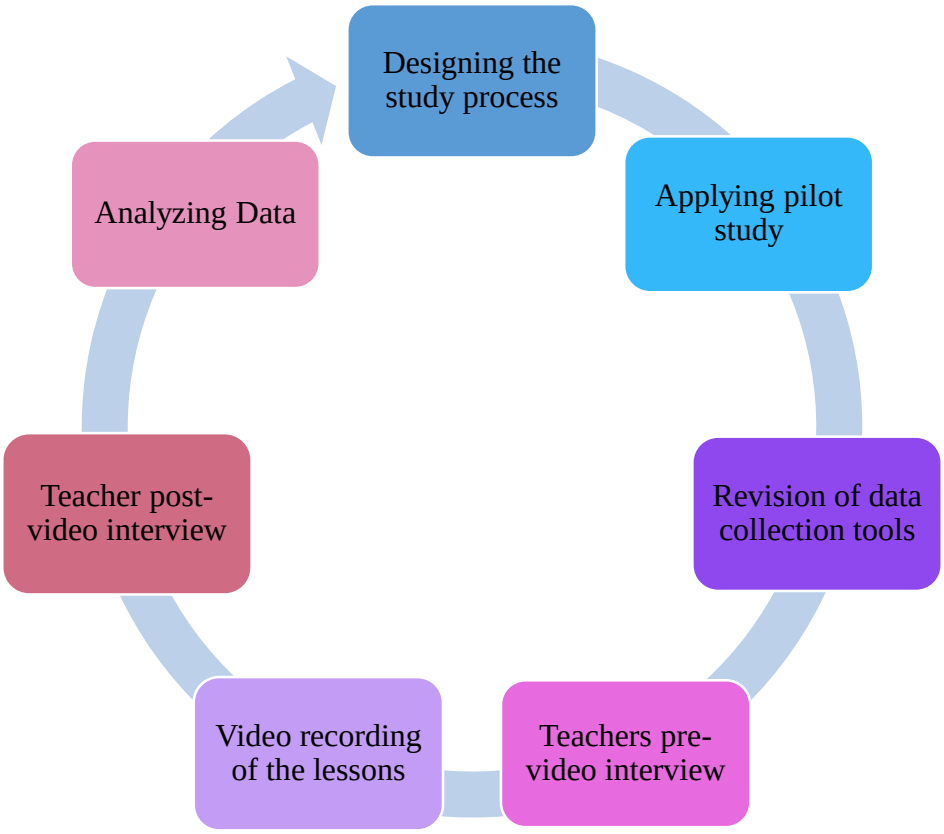

Figure 3. 3 Design of the Video Study Process

3.5. Data Analysis

In this study, the researcher collected qualitative data with two different data gathering tools as videos and semi-structured interviews. The interviews were applied before and after the video recordings of the lessons as pre and post-video interviews. Creswell (2007) indicated that the data analysis was not an isolated process from the data collection step and part of study. The researcher started to

plan the analysis during data collection After collecting data with different data sources, the organization of the data was an important part for beginning data analysis (Patton, 2002). The data analysis of this study had three steps as transcribing the interview and video recordings, description of cases by within case analysis and cross case analysis to compound all cases.

The data were collected, organized and analyzed with transcribing, coding and constructing of themes by the researcher. While analyzing the data, the researcher transcribed the recordings of interviews and videos in a qualitative analysis program. After the transcription of data, the researcher formed the codes and the themes. MAXQDA Qualitative Data Analysis Software 12.0 was used to analyze and organize whole data. After the deep analyzes of the qualitative data the codes and the themes revealed the design.

The researcher analyzed the interview data and the video data to identify description of cases. Fraenkel, Wallen and Hyun (2012) indicated that the descriptive analysis was useful for demonstrating human behaviors and communication. Then codes were revealed to form the main themes in order to form the results. After the first descriptive analysis and second depth analysis, the researcher formed the themes with the means of codes deduced from interviews and video recordings for this study. This study included five different videos, five different teachers and five different cases in technology enhanced English language teaching classrooms. Every teacher constitutes a case with different grade levels, learning levels and age of students. In order to evaluate whole cases, first all cases were formed by deep analysis and description of classroom elements as students, technological tools, materials and contents of the lesson.

After the identification of all cases and description of separate cases, the researcher implemented the cross-case analysis to clarify and explain all cases in a whole context. All cases had different elements and properties. The researcher obtained more information from cases by evaluating as a whole. Miles and

Huberman (1994) reflected that with the cross-case analysis, the different cases were taken for handling in a particular topic to make comparisons and to present effective results. They indicated using cross-cases comparison to find out similarities and differences between cases. Yin (2009) underlined cross case analysis as ‘‘a technique used to aggregate the findings across a series of individual studies’’ (pp. 134). Regarding these acknowledges, the researcher used the cross-cases analysis to define five different cases in a particular purpose. After all, the results of the study reflected three main categories and their themes. Table 3.4. summarized the design of TPACK for English learning environment.

Table 3. 4: *The Design of TPACK in ELT Classrooms*

Reasons of technology integration	Lesson Design	Actual teaching
Enriching lesson	Selecting technological tools	Lesson entry behaviors
Increasing students' motivation	Lesson planning	Technological teaching strategies in ELT
Providing permanent learning	Preparing materials	Technology enhanced classroom management
Offered technological opportunities	Planning assessment	Troubleshooting with technological problems
Addressing all senses		Technology based assessments
Developing skills		

3.5.1. Description of Cases

After the analysis data, the researcher identified cases of teachers. Cases presented characteristics of participants both teachers and students, summary of

video recorded classroom environment and short information about lesson process like topic, objectives and methods were given case by case.

The participants' descriptive information and information about topics of the lesson, lesson process and technology tools used during lesson summarized with the analysis of interviews and videos. Some short information of five teachers, 95 students, the elements of lesson and integrated technology with videos as students, lesson subject and classroom setting were tried to be described with the analysis of teachers' interviews and videos in order to clarify the lesson process. The researcher clarified five different cases from five different classroom environments and five different teachers with five videos. The researcher summarized the cases below.

Case 1: **Sarah**

Sarah was an English language teacher in this private school, she worked in this school about two years which was also her year of experience at work. She graduated from English language and literature department. After her graduation, she got pedagogical formation certificate and started to work as an English language teacher. In this school, she worked in primary school department comprising of 1^{th}, 2^{nd}, 3^{th} and 4^{th} grade levels of students. Before beginning to work in this school, because of the technology enhanced school, she participated in pre-service technological courses given and made obligatory by the school management.

If talking about the classroom environment of the teacher Sarah, the video was recorded her 4^{th} grade level of students. In this classroom, she had about 15 students. The ages of the students were between 9-10 years. Sarah described the level of the students as beginner. The topic of the lesson subject was concepts of health. This subject of the lesson was a new one for these students. The objectives of the lesson were to be able to understand the importance of health, express themselves related to health issues, explain the illnesses and use target language skills effectively. The teacher indicated in the interviews that she used the smart board and other technological tools; however, the students did not use the tablets in

classroom because of their age. The teacher stated that she adopted Communicative Language Teaching Method and her goal was to develop the language skills with the help of technology.

Case 2: **John**

In this study teacher John was our one male participant. In the private school he worked as English teacher about two years in high school department teaching to 9^{th}, 10^{th}, 11^{th} and 12^{th} grade levels. However, his experience year of teaching was six years. He graduated from department of English language teaching. Like other teachers, because of being in a technology enhanced school he joined pre-service teacher technology education program.

The teacher John's video recorded classroom comprised of 21 students who were 9^{th} grade level and about 14-15 years old. The grammar topic of the video recorded classroom was Simple Present Tense. The subject was a repeated one, not a new topic for students. The objectives of the lesson were to be able to explain daily usage of simple present tense, to express themselves by using simple present tense and talk about real life activities. The teacher articulated teaching method of the lesson as Communicative Language Teaching Method. He articulated the level of the students as pre-intermediate. In his classroom students had tablets and the classrooms had interactive smart board and tablets as technological tools through the video recorded lesson.

Case 3: **Mina**

Another teacher was teacher Mina. She was working in this private school about two years. Her teaching experience was three years before starting to work this school she worked for about a year in another school. She graduated from department of English language and literature. After her graduation, she got pedagogical formation certificate before beginning to work as a teacher. In this school, she worked in secondary school department consisting of 5^{th}, 6^{th}, 7^{th} and 8^{th} grade levels. She expressed that she was interested in technology and her main

reason of working in this private school was having technology enhanced classrooms. Before starting to work in this school as a teacher Mina also participated in-service teacher training offered by the school. Through her university process, Mina also took courses related to technology and education including software programmer courses because of her interest on technology and technology usage.

The video recorded lesson of teacher Mina was 7th grade level of students whose age ranged between 12 and 13 years old. The classroom had 18 students. Mina indicated the language level of students as elementary. The lesson grammar topic was comparison of the past tense and past continuous tense. The objectives of the lesson were to be able to use tenses in sentences, understand basic concepts of tenses and develop language skills by using the tenses and words. The teacher reflected the teaching method of the lesson as an eclectic teaching model which combining of Communicative Language Teaching Method and Audial-Lingual Method. The technological tools used in the lesson process were tablets of students, interaction smart board and online learning tools.

Case 4: **Laura**

Teacher Laura was the newest English teacher in this private school. She graduated from department of English language teaching and worked about a year in another school. She started in this school a year ago and her teaching experience was two years. She was also worked in secondary school department with 5th, 6th, 7th and 8th grade levels of students. Before started to work this school, as other teachers she participated technology in-service training program offered by the school.

Laura's video recorded lesson was 5th grade of students. She had 20 students who were 10-11 years old in her classroom. She also acknowledged their level of language as beginner. The subject of the lesson was daily routine activities. Laura indicated that the topic of the lesson was mostly a new topic for the students. The

objectives of the lesson were to be able to explain daily activities, use simple present tense, use language skills as actively. The grammar topic of the lesson was Simple present tense. The teacher Laura articulated her teaching method as Communicative Language Teaching Method. The technological tools were students' tablets and smart board.

Case 5: **Emmy**

Teacher Emmy was the most experienced teacher among these English teachers. She graduated from English language department and got master's degree in English language teaching department. She was working in this school about 3 years and her experience year in teaching was 18 years. Emmy also worked in secondary school department with 5^{th}, 6^{th}, 7^{th} and 8^{th} grade levels of students. Through her education process, she also took technology related courses. Before she started to work in this school she also joined the in-service technology training program of the school. She interested in technology and technology integration of education, in that reason she was open to learn related to technology in education.

The teacher Emmy's video recorded lesson was with 5^{th} grade levels of students. She had 21 students in this class. These students' age range changed between 10-11 years old and their level of English was elementary. The subject of the lesson was learning 'have to / has to' and 'there is/ there are' structures. The topic was specified as half a repeat and half a new one by teacher Emmy. The objectives of the lesson were to be able to learn main structures, make sentences with given structures, use language skills and express their needs. Emmy reflected her teaching method as Communicative Language Teaching Method. She also declared technological tools used in the classroom environment as students' tablet and smart boards.

3.6. Trustworthiness

Trustworthiness is one of the issues to provide validity and reliability of the study. Researches have different ways to enable trustworthiness in qualitative studies. Lincon and Guba reflected some criteria, one of them was credibility defined as internal validity (1985). In order to avoid the researcher bias and provide credibility, the researcher used some different techniques during the implementation of the study and analysis of the data in this study.

The pilot study ensured the qualitative data collection tools' validity with another researcher before the implementation about a semester ago. The researcher found a sample classroom and decided the video tools' position, location and equipment at the end of the pilot study. Also the researcher put into final form of the interview questions with another researcher and expert opinions after the pilot implementation of interviews with teachers.

Triangulation: Data triangulation described as the data gathering by different tools to rich and strength the study's validity was an essential way (Patton, 2002). Besides, Merriam (2002) supported more than one data gathering tool was essential to provide validity in qualitative studies. In order to provide data triangulation, in this study pre-interview of teachers, video recordings of classrooms and post-interview of teachers were applied. The researcher collected data by different data tools to see participants' personal views by their side and videotaping them in the classroom environment to see their technology engagement.

Peer check: During and after the evaluation of the data, the researcher carries out the process with another researcher studying the related topic. While preparing the data tools and procedures and the data analysis parts of the study, the researcher contacted with another researcher. For the data analysis, the researcher also gets help other researchers in order to provide objectivity.

Ensure honesty in informants: At the beginning of the study, the researcher made some explanations about purpose and process of the study. For all participants both teachers, students and also school management, the researcher gives particular importance voluntary participation and provide participants be clear for the data. Especially for the teachers being main participants of the study, the researcher gives importance for video and interview safety and receives approval of all students and teachers before the implementation of study. The researcher also paid attention to make interviews in quiet and safe room as school library.

3.7. The Researcher Role

As a researcher, my special journey and interest on studies about technology integration into language learning environment has dated on my teacher experience about two years. After my graduation as an English teacher, I studied a small city to work in east of Turkey. My small school was a pilot area for technology project to enrich all classroom environments with interactive smart boards and tablets. After the setting up of smart boards on all classrooms, the provincial directorate for national education initiated an in-service teacher education program to use computers and smart boards. It was obvious that this type a project in our country revealed different problems because of deficiency of knowledge. Although, some teachers were willing to use smart boards, they faced with many difficulties and problems stemming from lack of technological infrastructure. About two years, I witnessed this technology integration process personally and tried to use actively in my language teaching environment although I met with different essential problems as calibration of smart boards, internet connection and access to online lesson materials. As a teacher, I wondered how to overcome these problems and how to integrate technology more actively in my lessons.

After my teacher experience, I understood that technology integration was not only to provide of technological devices. Then, I started to work as research assistant. I began to study my master education on educational sciences in the

department of curriculum and instruction. In my second term, while taking my courses, I met my advisor and participated in her course about teacher education and technology practices researches. In this course, I carried out a study with an instructor and I had a chance to observe a technology integration process. Beside of this course, I also took other technology related lessons to both develop my technology usage and get information about the technological studies in all around the world. In this process, I had also opportunity to be a researcher in technology integration process. At the end of three years, I examined different researchers on technology integration and I was acquainted with the term defined as technological pedagogical content knowledge (TPACK) of teachers on technology integration process.

In this process, I wondered about technology usage and TPACK components of English language teachers due to my background. Based on my personal teaching experiences and my researching experiences on technology integration process, I wanted to study with English language teachers on using technology actively in their classrooms and TPACK competences.

In this study process, I took part as a researcher for my master thesis. Before conducting this study, I determined the school using technology actively in their classroom environments. After the determination of the school, I got in contact with the technology manager of the school to apply my study in their school. With the technology manager, I met with the teachers to adjust the time management of the study and to become acquainted with the teachers. We determined the classrooms and time of video recordings together taking into consideration their suggestions and appropriate lessons.

In the data collection process, I spent about a week in the school to observe the school environment. As a researcher, firstly I collected pre-video interview data of my participants. Before the video recording of lesson, I met with a teacher in his/her spare time and I applied pre-video interview in a silent and safe place like

library or an empty teachers' room. I only asked my pre-video interview questions and recorded by permission of my participant. In the video recording part, for the determined lesson of break time I placed the camera and tripod at the edge of the classroom. As a researcher, I video recorded whole lesson during instruction. I was also classroom environment to check camera and recorded properly all behaviors and interactions of teacher and students. After video recording of the lesson, I again met the participant after the video recorded lesson to apply post-video interview. I again just asked the post-video interview questions and recorded the teacher's answers in an appropriate place.

As a summary, in this process as a researcher I just collect the data from the teachers. I did not interrupt both interviews and video recording lessons to avoid researcher bias not to affect the teachers and students through interviews' and video recordings' process. I followed this process for each participant in this way. I just had an observer role and collect the data.

3.8. Limitations of the Study

This study had some limitations. One of them is that the sampling of the study was not determined as random sampling because of selecting the particular teachers use technology actively were determined in order to define ELT teachers' behavioral indicators of TPACK framework. Since, the study should be conducted in technologically integrated schools, in this reason a school was decided as adopting technology and language learning as educational policy. Moreover, the study has five different English language teachers, five different classes and four different grade levels of students in the same private school. Data collection from very different levels was possible. Taking into consideration of different students' needs, levels, ages and lesson topics, all teachers used different strategies in terms of both technological and pedagogical applications in their lessons. Each lesson was specific properties.

Secondly, the study design was video case study. The researcher conducted video instruments into the classroom and video recorded whole lesson process by own as placing in the classroom. For this reason, some students and teachers could be affected from video camera. Camera bias could be revealed. For example, some teachers changed their lesson process, strategies, and technology usage by the reason of video recording. The researcher could not prevent this bias caused by the nature of the data collection tool.

Because of conducting a qualitative study and using pre and post-video interviews to collect data from teachers, the researcher could not ensure about the answers of teachers. Nevertheless, the study was reinforced by both videos and interviews to preclude participant bias.

Lastly, the study context was a private school having technology enhanced classroom environments, tablets for each student and active technology usage by all teachers. However, the pilot study was in a public school in Ankara having less technological abilities and devices. The school context between the pilot and applied school was a bit different technological properties, student and teacher profiles from each other. This situation could be a limitation for this study.

3.9. Ethical Considerations

This research was conducted after all ethical considerations were required. After the researcher prepared the last form of the pre and post video interviews and video recording procedure, the forms were sent to Human Subjects Ethics Committee in METU. The Committee stated that the research procedure and data collection tools of the study were appropriate to apply and the study had no violation, deception and ethical problems. After taking the approval of Committee (Appendix D), the researcher applied to the Ministry of National Education to take permission for conducting the study in schools affiliated to MoNE. After the approval of the MoNE (Appendix E), the researcher found out the participants of

the study by purposefully and started to conduct the study. All participants were informed about the consent forms and joining the study based on volunteerism and this form were given to participants both from teachers (Appendix F) and parents of students (Appendix G). Participants were informed about all visual and audial recordings would be used in only this research.

CHAPTER 4

RESULTS

In this chapter, the results of video and pre and post-video interviews data were presented. The purpose of the study was to examine the reasons for technology integration and ELT teachers' TPACK indicators observed in technology enhanced English teaching lessons. The researcher implemented he study to find answer to three research questions as:

1. What are the reasons of English teachers to integrate technology in English language teaching classrooms?
2. What are the indicators of English Language teachers TPACK in the lesson design processes in technology enhanced language teaching classrooms?
3. What are the indicators of English Language teachers' TPACK in actual teaching in technology enhanced language teaching classrooms?

First, the findings of the study found out the reasons to integrate technology into language teaching environment. The analysis of the video recordings and interviews data revealed two main heading themes as components of the design, these are; Lesson Design and Actual teaching parts. In every main heading have themes to form design. Design section includes four themes: Technology selection, curriculum planning, preparing materials and planning assessment. The actual teaching section consists five themes as lesson entry behaviors, technological teaching strategies in English language classrooms, technology enhanced classroom management, troubleshooting with technological problems, technology based assessment.

4.1. Reasons of Technology Integration

The findings revealed six reasons for English language teachers: Using technology into their instructions to enrich lesson, increasing students' motivation, providing permanent learning, given readily available materials and addressing all senses. These reasons can be listed below Table 4.1 with frequencies.

Table 4. 1: *Reasons of Technology Integration into Learning Environment in ELT*

Reasons for technology integration	*Reported frequency*
Enriching lesson	All
Increasing Students' motivation	Emmy, John, Laura, Mina, Sarah
Providing permanent learning	John, Laura, Sarah
Offered technological opportunities	Emmy, Laura, Mina
Addressing all senses	John, Laura
Developing language skills	Emmy, Mina

All of the teachers used the technology in order to enrich their learning environment with different activities, tools and materials. The teacher Sarah summarized this reason as ''With the help of technology, I use different activities and games from smart board and tablets, technological devices enable to vary my learning environment with different activities, exercises and visuals.

Another crucial theme of these reasons was to increase students' motivation. The teachers thought to increase students' motivation with the help of technology by students' willingness and interest technology. Through using technology, most of the teachers underlined that students wanted to use technology in the lesson. The teacher John mentioned:

> My main reason for using technology is to motivate students for the lesson for this level and class of the students, gain students attention and save my time in the lesson process because with the technology I think that I get students focus on the lesson because students are interested in it intensely.

One of the reasons addressed to different senses with technology integration reflected Laura for using technology was ‘‘Using technology in my lessons cause to address different senses of students like listening and pictures at the same time’’.

The teachers articulated that the development of the skills was supported with technology learning environment. These teachers also mentioned that because English language teaching was based on developing skills as listening, speaking, reading and writing, the technology usage in the lesson process enrich the learning environment with different activities, games and exercises as Emmy reflected:

> With the integration of the technology in the lessons, as a teacher I can present students with both visual and audial elements. I believe also that with technology usage in the classroom environment we can provide permanent learning by motivating and focusing students in the lesson. The students are very willing to use technology, and they are eager to using technology more than us.

Teachers reflected the reasons of the technology integration in different ways. To summarize, all teachers had their specific and personal reasons with using technology in their lesson process. However, the main usage of technology was that technology integration was provided and obligated by school and the school learning environment was organized to use technology as it is stated classroom settings part. For this reason, the teachers were offered technological opportunities and they were obligated to use technological devices. One of the teachers who verbalized this situation clearly was Laura. She reflected:

> Technology in our school is obligatory to use, since the lesson materials are prepared for technology usage like e-books and activities. And also we do not have whiteboards or any other materials to use without technology. We have no any change to select technology usage.

All teachers had different reasons to use and integrate technology in their environments. As a summary, the teachers emphasized six main reasons to use technology. However, the essential reason was to offered technological devices as a school policy. The teachers were forced to integrated technology because the

school management equipped all of the classrooms with technological devices and the teachers did not any choice to use actively.

4.2. Lesson Design

The first part of the design was lesson design. In this section, this design comprised of two main components as lesson design and actual teaching constructing design process. After the analysis of the pre-video interviews data, the teachers maintained lesson design process before coming to the lesson. The design reflected four main titles including technology selection, lesson planning, preparing materials and planning assessment. The lesson design process displayed sub-themes and main codes of lesson design below with the explanations. Table 4.2 presented the lesson design process and explained its components.

Table 4. 2: *Lesson Design Based on Pre-Video Interviews*

Lesson Design	*Reported Frequency*
1. Selecting Technological Tools	
Checking students' needs	Emmy, John, Mina, Sarah
Checking efficiency of technological tools	John, Laura, Mina, Sarah
Checking interface of technological tools	Emmy, Laura, Mina
Checking the relevance with the curriculum	Laura, Sarah
2. Lesson Planning	
Identifying the methods and strategies	All
Organizing the order of the topics	John, Laura, Mina, Sarah
Identifying the objectives	Laura, Mina
3. Preparing Materials	
Designing materials based on target group	Emmy,John,Mina,Sarah
Relating materials with content	John, Mina, Sarah
Checking technological lesson materials before lesson	Laura, Sarah
4. Planning Assessment	
Designing assessment	Laura, Mina, Sarah

4.2.1. Selecting Technological Tools

The first part of the lesson design was selecting technological tools process. While selecting technological tools teachers consider different properties. Data analysis reflected four themes to explain selecting technological tools to use during instruction as checking students' needs, checking efficiency of technological tools, checking interface of technological tools and checking the relevance with curriculum.

One of them was needs of students, teachers took into consideration to students as the main reason while selecting technological tools to make activities and exercises in their learning environment. Four of five teachers specified that the students' needs, age, level and characteristics were very important to select appropriate technology. Mina emphasized this theme as ''I can say this that, while I am deciding technological tools and technologic based activities, I look firstly my students. I their age, level, interests and also how they can learn.''

The second important issue was the efficiency of technological tools to select proper technology. The teachers defined the efficiency of the technology as being time saving, making the lessons easy and decreasing the workload of the teacher both in and out of the classroom. The teachers frequently appreciated the technology usage for timesaving side. John revealed that:

> As a teacher, time is very important for me. Because I have many students to care, many subjects and grammar topics to teach and many activities to prepare. However, with the technology and technological devices I save time. For example, in the lesson I write on board and immediately send my students, this give me more time for other activities and reinforce the topic.

Interface also was an important property of used technology in order to use pleasantly by the teachers. The teachers gave attention on interface of technology as being practical, being used easily and being easy to learn. As Emmy emphasized this theme as ''The technology should be easy for classroom usage and be learnable

without much effort and time, it shouldn't be too complicated for me and also for students.''

The last reason was checking relevance of technology with curriculum. With the blending of technology, objectives and lesson goals besides using authentic materials were provided and enriched in language learning environment. Two teachers mentioned that the selected technology integrated in their classrooms should be appropriate to use and blend with the curriculum objectives, materials and activates. Laura reflected:

> I give importance on my lesson objectives while selecting technological tools to integrateactively in my instruction process. I think that it is also important because technology should also correspond with objectives, topics and grammar of my lesson.

For the technology selection part to design lesson, the teachers articulated the themes that how they could select technology based on which properties to integrate lesson environment.

4.2.2. Lesson Planning

Another part of design was lesson planning. Analysis of data revealed three sub-themes of curriculum planning themes as identifying the methods and strategies, organizing the order of the topics and identifying the objectives. While planning their lesson process, all of the teachers make different things based on regarding their students, lesson topics and lesson process.

One of most the important issues for planning lesson process was selection and identification of the objectives. The objectives and goal of the lesson mainly mentioned in their curriculum program, however while they designing their specific lesson, the teachers took into considerations while they preparing lesson. All of the teachers stated to give importance on checking their objectives and available technological possibilities. For example, the teacher Mina had a lesson to teach and clarify the difference between Simple Past and Past Continuous Tenses. She stated

to identify which methods and which technologic possibilities she could use. Depending on the curriculum, she mentioned to decide techniques and methods to use in classroom with blending technology. Sarah also supported that:

> This lesson's objectives are related to health subject; the students will explain the name of illness by using in the sentences. The importance of the topic is that the students can meet different illnesses in their life and they can be obligated to articulate themselves when they are abroad. It can be crucial for them, while I am selecting objectives I give importance their needs.

The organization of the topics was also important for lesson planning. The teachers underlined that organization of the topic was one of the necessary process for curriculum planning process. Another one was identification of methods and strategies. All teachers before coming into classroom conducted their teaching methods and strategies.

The last element of lesson planning was identification of the lesson objectives. While teachers composing their technology enhanced lesson, they took into consideration the lesson objectives. Two of these teachers emphasized these. As Mina mentioned tahat ''I also review lesson program and course book to look at the objectives. I defined my lesson objectives and I configured my lesson process in which tools, games, technologies and activities I would use properly.''

As the teachers made clear, lesson planning was a crucial part to integrate technology and decide how and which technologies would be used depending on curriculum elements as methods and strategies, topics and objectives of the lesson and topics.

4.2.3. Preparing Materials

The third part of the designing process was preparing materials. In this section before the actual teaching process, the teachers prepared their lesson materials. The teachers described three sub-themes of preparing material process as

designing materials based on the target group, relating materials with the content and checking technological materials before instruction.

One of the significant elements related to preparing material and reasons was considering target group characteristics like age, level and needs of students. All teachers had different classroom environment and characteristics of students. ın that reason, while preparing their lesson materials four of five teachers depicted that they took students characteristics as age, level and needs. For example, Emmy said that she used online games in this class be video recorded, however, in other classes she did not use any online games because of their ages and level. For this reason, she clarified that she prepared her technological materials based on students' characteristics. In this context, Sarah also said that:

> Why I am checking my materials, because I cannot show anything from internet randomly. We confront with unrelated things or inappropriate concept suddenly. In that reason, I should watch before and decided to proper one for students' level and age. I feel that I should use technology in a controlled way and prepare my lesson plan in these premises.

The second component of preparing material was relation to the content. In the classroom environment materials should be related with the topic. It could not be under consideration separate the materials and the topic. Like other three teachers, Mina reflected this issue as ''While selecting technological tools, I generally determine my lesson materials based on the topic.''

One of the important elements of preparing materials was checking the materials before the lesson like videos, e-books and assignments. Because in the actual lesson process the teachers did not want to meet any problems set lesson back, they check technological materials beforehand. Most of the participants in the study reflected that they checked and prepared their materials before lesson process and came into classroom. Emmy said that she had to open and watch the videos or read the texts before lesson because she had to know their context. In classroom she

reflected that she did not want to meet with inconvenient things for students. The teacher John articulated also:

> When I will use the technology in my lesson like videos, listening text or etc., I checked them before coming to classroom because I should be sure about these materials' relevance for students and using in classroom environment. Actually, I prepare my lesson plan in this way.

Teachers mainly indicated their priorities while they were preparing materials. In this part, the teachers' articulations presented the sub-themes of preparing material process.

4.2.4. Planning Assessment

The last part of designing lesson was to plan the assessment parts and types. This section had one significant theme as designing assessment. The teachers planed how to assess the students during and after the lesson process. In the lesson environment they used online exercises, quizzes or tests as they used after the lesson. The teachers plan and examined how they would design their lessons. In the pre-interviews, three teachers reflected that they planed also technology based assessment and how to evaluate students' learning before lesson. The teacher Sarah articulated in her words for planning the assessment as:

> Depending on my methods and techniques I will use in lesson process, I also think about my evaluation both in my lesson and out of classroom. I prepare my plan and then decide how I will assess my students before come to class. Sometimes I look for online tests or exercises to observe learning of students.

As a summary, assessment is an important part of lesson process to examine language learning development. In this reason the teachers mostly plan their assessments to evaluate the learning and development of students. They also reported that both for the during and after lesson, they planned their assessment with technology and available technological devices as smart education, online platforms and students' tablets.

4.3. Actual Teaching

The researcher complied the actual teaching process from the analysis of the post-video interviews of teachers and video recordings. The actual teaching part included the descriptive properties and elements of the lesson process. The analysis of data presumed the TPACK indicators from describing teachers' active movements from lesson video recordings and the teachers' comments from post-video interviews about using and integrating technology into classroom environment actively. The consideration of deep analysis of qualitative data gathered from teachers via post-interview and video recordings data mainly formed themes and sub-themes.

The actual teaching process included five main categories named as lesson entry behaviors, technological teaching strategies in ELT, technology enhanced classroom management, troubleshooting with technological problems and technology based assessment. Table 4.3 demonstrated the themes and sub-themes of actual teaching process indicators from the analysis of both observations of video recordings and reported of post-video interviews from teachers.

Table 4. 3: *Indicators of Actual Teaching by Based on Analysis of Videos and Post-Interviews*

Actual Teaching		
1. Lesson Entry Behaviors	***Observed***	***Reported***
Gaining attention	All	All
Checking technological tools	Emmy, John, Mina, Sarah	Emmy, Mina, Sarah
Taking online attendance	Mina, Sarah	John, Mina, Sarah
2. Technological Teaching Strategies in ELT		
2.1 Technology Enhanced Specific Platforms in ELT		

Table 4.3 (continued)

Using e-books	Emmy, John, Laura	Emmy, John,Laura, Sarah
Visiting specific language learning webpages	John, Laura, Mina	Emmy, John, Laura, Mina
Using YLP	Emmy, Mina	Emmy, Mina, Sarah
Using STOYS	-	John, Laura
Using Scholastic learning zone	-	Emmy
2.2 Technology Enhanced Strategies		
Doing online exercises	All	All
Using authentic materials	Emmy,John,Mina,Sarah	All
Selecting and sending of writings	John,Laura,Mina, Sarah	Emmy, John,Laura, Sarah
Making question & answers	Emmy,Mina,Laura, Sarah	Mina, Laura, Sarah
Making online review with technological tools	John, Laura, Sarah	Emmy,John, Laura, Sarah
Playing online games	Emmy, Mina	Emmy,Mina,Sarah
2.3 *Technology Enhanced Skills Development*		
Listening	Emmy, Mina,Sarah	All
Writing	John, Laura, Mina	John, Laura, Mina, Sarah
Reading	Laura, Mina	Emmy, Laura, Mina
Speaking	Emmy, Sarah	Emmy, Sarah
3. Technology Enhanced Classroom Management		
3.1 CM problems stemming from technology		
Arising distracted students	Emmy,Mina,Sarah	John, Emmy, Mina, Sarah
Causing noisy classrooms	Emmy, Mina	Emmy

Table 4.3 (continued)

3.2 Possible solutions for CM problems		
Changing the settings	Emmy, John, Mina, Sarah	John, Laura, Mina
Giving immediate feedback	Laura, Mina, Sarah	All
Focusing students on lesson/topic	Emmy, Mina, Sarah	John, Mina, Sarah
Making the students group	John, Mina, Sarah	Mina, Sarah
Reinforcing with online stickers	Laura, Sarah	Emmy,Mina,Laura, Sarah
4.Troubleshooting with technological Problems		
4.1 Unavaliable students' Devices		
Charging problems	Emmy, Mina, Sarah	Emmy, John, Laura, Mina
Forgetting to bring tablets	Mina	Laura, Mina, Sarah
4.1.1 Possible Solutions		
Making students matching	John, Mina, Sarah	Emmy,Laura,Mina, Sarah
Ignoring problem	Emmy, Laura	Emmy, Laura, Mina
4.2 Software Breakdown		
Smart board problems	Emmy, John, Mina, Sarah	Emmy, John, Mina, Sarah
Calibration problems	Emmy, John, Sarah	Emmy, John, Laura,Sarah
Setting of page problems (writing, listening)	John, Mina	John, Laura, Mina
4.2.1 Possible Solutions		
Making an individual effort (restarting)	Emmy, John, Mina, Sarah	All
Asking students' help	Emmy, John, Mina	Emmy, John, Laura, Mina
Getting help from technical support team	-	All
4.3 Network Disconnection		

Table 4.3 (continued)

Selecting & sending problems to board and tablets	John, Laura, Sarah	Emmy, John, Mina, Sarah
Connection problems	John, Mina	John, Laura, Mina, Sarah
4.3.1 Possible Solutions		
Resending of writings	Laura, Mina, Sarah	Laura, Mina, Sarah
Changing teaching strategy	Laura	Emmy, Laura, Sarah
5. Technology Based Assessment		
5. 1 Online Assessment		
Assessing with online tools	John, Mina, Sarah	All
Assessing skills	Emmy, John, Laura	Emmy, John, Mina, Sarah
Sending students online homework	Mina, Sarah	John, Laura, Mina, Sarah
Making online quizzes/tests	Mina	Laura, Mina, Sarah

4.3.1. Lesson Entry Behaviors

Lesson entry behaviors included three categories as behaviors that teachers exhibit at the beginning of the lesson before starting the main topic. All teachers used technological tools as lesson entry behaviors and they described this theme as preparing students to lesson with technology at the beginning. The three main behaviors were gaining attention, checking technological tools, and taking online attendance before beginning to teaching process.

Gaining attention was observed from all of the teachers participated in the study. All of the teachers reflected that they used technology to gain students' attention at the beginning of the lesson. When the teachers came into the classroom, they gave importance to take students attention to lesson or teacher. The teacher Mina opened different an application on the smart board at the beginning of the lesson and tried to focus her students on the lesson. She also reflected that ''Today, I have new application for you, Let's look at Class Dojo. At the beginning I focus

them on lesson and at the end of the lesson I will give some stickers based on your behaviors through lesson.''

The second element comprising lesson entry behaviors was checking the technological tools as opening the e-book, putting on flash and controlling internet connectivity. Four teachers displayed checking technological tools when they came into classroom before starting to lesson. For example, the teacher Sarah turned on the smart education and inserted flash drive to open smart education. Three teachers also reported in their interviews this situation. Mina indicated that ''When I enter the classroom, first of all, I control my smart board and open my e-book, smart education.''

Some teachers exhibited that they took online attendance with the connectivity of tablets and smart board. The teachers opened the smart education and initiating students to connect with table, and thereby looked over the students at the beginning of lesson. Two of these teachers displayed actively while they were taking online attendance and three of them report this in their interviews. As John reflected ''I took attendance of my students with the help of smart education. When I came into class I want my students to open and join to smart education to see and check the students existing classroom.''

As a summary, taking attention with technology took a crucial place for teachers' lesson process to focus the students on the lesson and topic.

4.3.2. Technological Teaching Strategies in ELT

The teachers stated that the employment of teaching strategies varied from lesson to lesson and also from topic to topic. When taking into consideration English language classrooms, especially in this private school, the selection of the teaching methods mainly based on the technological possibilities presented by the school. In this part, the analysis of videos described and post-video interview questions reported the technological teaching strategies in English language learning environment. Outcomes of the study revealed three main themes as

technology enhanced specific platforms in ELT, technology enhanced strategies and technology enhanced skills development and their sub themes were deduced

Technology Enhanced Specific Platforms in ELT

In the school, the school management and the school policy give importance on both for technology enhanced education and language teaching. The school had variety of different technological tools, applications and web sites for English language teaching. The school also adopted some specific technological tools and online platforms as school language learning policy. The teachers mainly used the specific tools in language teaching environment provided by the school. Some of the teachers used their different technological tools to enrich their learning environment. For the technology enhanced specific platforms used in English language teaching classrooms included five sub-themes as using E-books, visiting specific language learning web pages, using Your Learning Place (YLP), using STOYS (Service Based School Management System) and using Scholastic Learning Zone.

Using e-book was one of the specific materials for teachers. Four teachers reported that they used e-book in their lessons and in videos three of them used actively e-book on the smart education platform during instruction. As Sarah indicated that ‘‘In fact, we generally use e-book of lesson, because these books are uploaded on both smart boards and also students’ tablets. Thus, this makes easier my lesson process.’’

The teachers reflected to used specific web pages which they found themselves related to their adopted teaching strategies. In videos, they made different exercises and activities with webpages by suggesting students. Four teachers reflected that they used various webpages for their lesson before and during lesson. Mina said about this theme that:

> I use some applications and online games like Duolingua and language games to develop their skills and pronunciations. They can turn on also their tablets and they make exercise in school, lesson, home or leisure times when they want.

Another specific tool used by teachers was YLP (Your Learning Place) provided by the school management. The school management supported the usage of this webpage as an online platform for following students' language developments with tests, exercises, activities and homework. Teachers could send homework and extra resources related to topics of lesson in this platform. Three teachers reported that they used them while in the classroom environment. In videos, two teachers used actively this program to send their students homework. One of these teachers was Sarah, she stated as:

> In our school, we have different web pages for English teaching. For example, Your Learning Place (YLP). This program has many grammar topic videos, listening texts, activities and prepared materials. At the same time, the students can select what they learn depending on their age, level; and what they want to learn. They can test themselves, that is to say all of the students do not meet the same subject and interface when they open the web page of YLP.

Another specific platform declared by teachers was STOYS (Service Based School Management System). They used this platform to monitor students' development with results of assessments and points of homework. Because of similarity of YLP program, some teachers declared that they used this platform to follow lesson process. For example, John pointed out that:

> In my lesson process, I use generally STOYS which is an online platform, sometimes I examine different activities and exercises from different webpages and upload and send them STOYS in order to give as homework for students.

One of the teachers indicated to use Scholastic Learning Zone platform. The teachers used this online platform to support language development with various resources like activities and books. The teacher Emmy explained it as ‘‘I use also Scholastic Learning Zone besides YLP and STOYS, this webpage can be described

as a digital library and services students' online educational resources in many ways.''

For English language teaching, teachers could use various and limitless internet based platforms. The teachers participated in his study clarified some of them due to these platforms provided by the school management.

Technology Enhanced Strategies in ELT

The strategies blended with the technologies were important TPACK evidences. The main language teaching method articulated by all of the teachers was Communicative Language Teaching Method. And another method was reflected by one teacher, Mina, was Audio-Lingual Method in their language teaching process. The video outcomes also revealed that the teachers adopted Communicative Language Teaching Method in their lessons. For example, teacher Emmy made dialogue activities, the teacher Laura made role playing activities with the help of technology, the teacher Mina played games through smart education and the teacher John made a discussion about a topic with his students.

As presented, the teachers used their teaching method and strategies by blending technological tools. Because, the school management and also the teachers prepared their lessons and lesson materials depending on technological possibilities. All of the teachers participated in the study obligated to use technology during their courses. For this reason, the strategies applied by teachers were with the help of technological devices and tools. These six strategies deduced from the findings of the study were; doing online exercise, using authentic materials, selecting and sending of writings, making online review with technological tools and playing online games. Both teachers' interviews and video recordings of their lessons revealed these strategies. All of the teachers used technology while they were implementing their strategies as doing online activities, using authentic materials and making questions and answering activities.

The first of the most important elements of technology enhanced strategies in ELT was doing online exercises. All teachers referred these theme and all of them were observed from all of the teachers' classrooms on videos. The teacher Emmy stated ''I use technology generally for making online exercises or activities in my lesson. I also use for mostly pronunciation like natives' dialogues or language games.''

With the help of these technology and strategies teacher became to enrich learning environment and creating an authentic language learning environment with native audio materials, present cultural visuals and enable to use the language actively. Videos demonstrated this theme that four teachers used technology to create authentic learning environment. For example, teacher Emmy opened a song on internet and sang with the students and the teacher Mina also used videos in her lessons. All teachers also articulated to use technology to create an authentic language learning environment. The teacher Sarah underlined as ''With the videos or listening texts vocalized by native speakers or language learning games connected with internet can help me to focus my students on the lesson.''

Selecting and sending of screenshots or writings as notes on the board was another technological strategy that was developed and used by teachers. In order not to waste their time, they sent the writings or exercise students instead of waiting a while. Three of teachers mentioned this sub-theme and videos demonstrated four of applied this strategy into their practical instruction process to save time.

In the classroom environment, all of the teachers asked questions and answer activities. They mainly managed this process through smart board and tablets. They asked questions and taking answers from students through smart board. While three of the teachers said that they making Q & A activities, videos showed that four teachers also used this activity many times through lesson process. As Mina mentioned:

> My technological usage is mainly for exercises. Because of I am working with 9th class students, I use classroom exercises and online sentence exercises mostly rather than games or applications. I asked a question my students and get answer from smart education.

The teachers also had opportunity to make online review of the students' answers and questions with the help of smart education and interactive tablets. The students sent their answers to smart board and the teacher was able to review the students' answers simultaneously and could give feedbacks to students with the help of technology. The video outcomes supported to use this strategy actively by three teachers in video recorded lessons and four teachers indicated in their interviews. A screenshot given below demonstrated this theme with Figure 4.1.

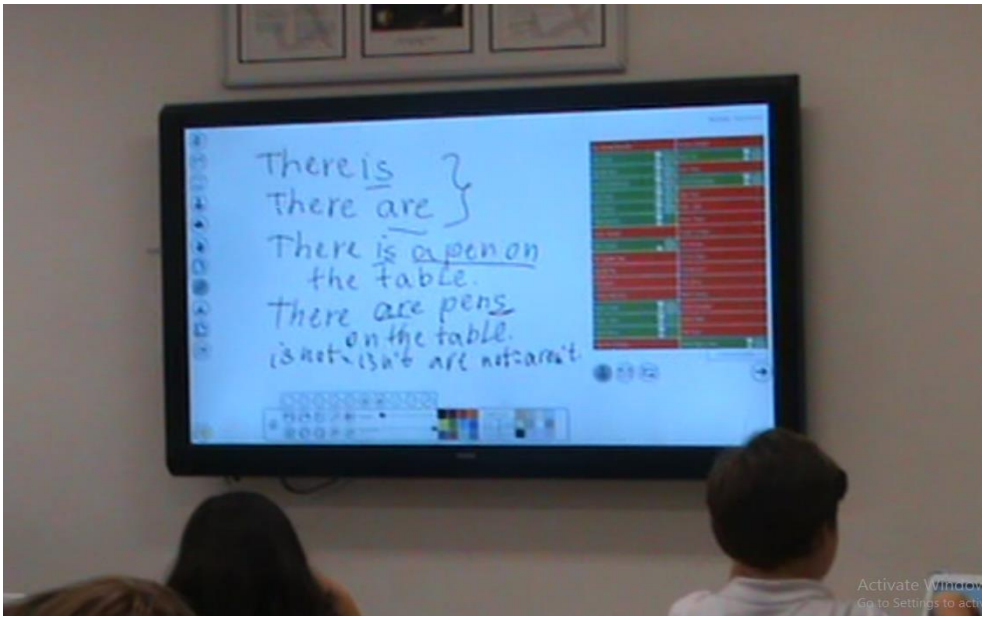

Figure 4. 1 Screenshot of Teachers' Reviewing Learning by Smart Education Platform

The last theme of technological enhanced strategies in ELT was playing online games. The teachers were sure and they reflected that games were important for students. In their classrooms, they played online games with their students.

Three teachers used games on tablets or smart board and two teachers were used actively online games in their lessons. Sarah clarified this theme as:

> In my classroom, I use tablets and smart board based on my students' age and level. I am working with 4th classes and for them; we have various technological based games as online from internet or applications. In my lesson, I use them sometimes.

Teachers used technology enhanced strategies for all parts of the lesson in technology enhanced language learning environment. Both video recordings and interviews supported this theme.

Technology Enhanced Skills Development

Teachers stated to provide the development of the language skills with the help of technology integration in this school. Teachers developed and enriched the language learning skills as listening, speaking and writing with technology integration actively.

The data outcomes announced that teachers supported mostly the listening skill with technology as listening text, dialogues from natives and songs. All of the teachers articulated that they could develop listening skill mostly with the usage of technology in classroom environment. In addition, during their video-recorded lesson, three teachers used listening activities in their lessons like videos, listening texts and songs. For example, the teacher John made listening activities in his lesson. He opened a listening text from smart education and after listening the text with the students, he discussed the topic with the students and answer the question of the text. The teacher Laura also signified that ''I use technology mostly for my listening exercises. The students can hear native speakers from listening texts or songs. I think that learning become permanent with listening.''

Another skill developed by technology was writing. The teachers reinforced the students' writing skill with the help of tablets. They developed their skill by answering questions on their tablets or writing short paragraphs about a given topic

during lesson process. Three of these teachers made a writing exercise with tablets in practical lesson process and four of them revealed that they could develop writing skill. The teacher Mina made writing exercise in her video recorded lesson. She wrote a topic on the board and wanted students to write a paragraph about this topic on their tablets. After the students finished the paragraph, they sent to smart board with their tablets. John also indicated that:

> I can say that also writing can be developed by technology with tablets. For writing exercises, I give a title related to topic and I want students write something about this. They can send their paragraphs to smart board and we can control, also all students can see the mistakes and correct their own paragraphs.

Technology integration also supported the development of reading skill. Three teachers reported that they provided development of reading with reading activities form tablets or smart board. Video recordings demonstrated that two teachers used reading activities with the help of tablets. For example, the teacher Laura sent a short story to students' tablets and she wanted them to read this story to answer questions. The students opened this story and read on their tablets. It was deduced also that reading could developed both speaking and writing skills. Emmy articulated that ''For the reading activities, I find reading texts or stories from internet and give them to read, summary and make activities related to given passage.''

Lastly, technology integration into language learning environment could develop speaking skills. In their videos and interviews, two teachers used speaking activities for the development of speaking skill. One of the teachers was Sarah, she made a karaoke exercises on smart board with the help of internet. She opened and made her students listen a song. After, she had the song said her students in chorus. The teacher Emmy also made a short dialogue exercises by reading from tablets in her video recorded lesson. They also revealed that speaking was an important skill for other skills to develop.

As mentioned above, teachers reflected to develop all language skills with the active technology integration by using different technological tools, materials and activities. Teachers tried to develop a language skill, they also supported other skills.

4.3.3. Technology Enhanced Classroom Management

Classroom Management Problems Stemming from Technology Integration

In the English language classroom had generally classroom management problems in Turkish language learning classroom context. However, with the creating environments by technology, this problem became to evolve different aspects stemming from technology usage. The teachers' post-video interviews and video recorded lessons displayed two main classroom management problems as distraction of students and noisy classrooms during instruction process.

The first one of them was the distraction of students. While the teacher was busy with technological tools, some students became interested in various things like painting. After the reflection of the data, four teachers reported that students were distracted from lesson resulting by technological tools. The video recordings clearly showed that in three teachers' classrooms, students distracted depend on technology and technological tools during lesson process.

Another important issue was creating noisy class environment. The students became noisy while using technological tools and classroom management problems revealed. The teachers depicted that students made a noise and broke away from lesson. One of the teacher reflected that technology caused noisy classes environment. The video results also showed that two teachers met with noisy students stemming from the usage of technology as tablets of students. Emmy pointed out that ''As I say, these students are younger and so they can begin to chat with each other when I am busy with smart board or smart education connectivity.''

Below, the screenshot demonstrated the distracted students with technology in Figure 4.2.

Figure 4. 2 The Screenshots of Students Distracted with Technological Devices from Different Classrooms

To sum up, although technology had many benefits for language learning environments, the technology might cause different classroom management problems. The teachers stated these problems in their post-video interviews and also videos displayed openly these classroom management problems.

Possible Solutions for Classroom Management Problems

After the identification of the classroom management problems by teachers, they developed their solutions for these problems in technology enhanced classrooms. These sub-themes were chancing the settings (marker, screen), giving immediate feedback by tablets, focusing students on lesson/topic, making the students group and reinforcing with online stickers. One of the sub-themes originated from technology was changing the setting of tools in order to gain students attention to the topic. For example, teachers turned up and down the volume of smart board, changed the color of marker, pause, and zoomed the videos or pictures. All teachers used the smart board to write down; for that reason, the

videos picturized that four teachers used these classroom management techniques and three of them expressed in their interviews. Figure 4.3. illustrated a teacher changing the color of the pen to focus students.

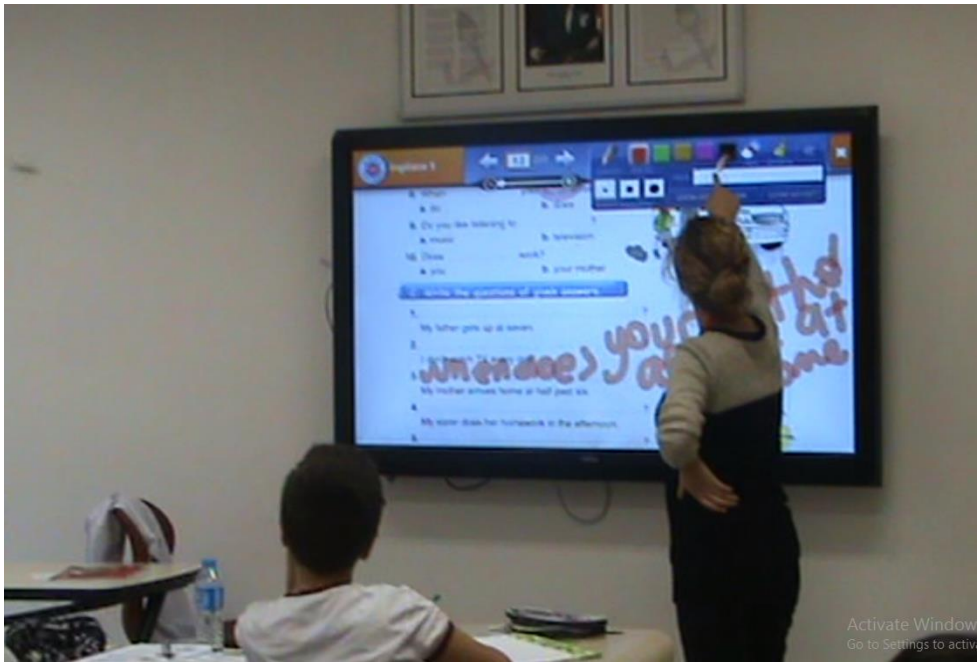

Figure 4. 3 The Screenshot of Changing the Settings of Smart board

All teachers participated in the study reported that they used immediate feedback applications generally. In the lesson, the students could ask a question from tablet and teachers gave immediate feedback. In videos three teachers used these feedback applications in lesson process with smart education while all of them articulated that they gave immediate feedback. Laura stated that:

> When I ask a question or want to translate a sentence from students in the instruction process while making activities, they write down and send me in an instant. I open it on the application, at the edge of smart board, and give feedback suddenly.

Three teachers stated that they could focus their students on lesson with the help of technology. Videos demonstrated that three teachers they dealt with

distracted students or noisy classroom environment with technology focusing the students on the topic. For example, the teacher Laura open a short video related to the topic from smart board. The teacher Mina also reflected that ‘‘I prefer using technology to get students attention on lesson and topic. Because they can easily be distracted from lesson.’’

Another theme for dealing with classroom management problems was making students group and encouraging them to join the lesson and activities. Depending on the lesson activities and process, in video recordings three teachers made group working in order to avoid student distraction. Two teachers reported also this situation in their interviews. Sarah said that ‘‘I group the students and provide them to use tablets together and do activities, when I notice that students start to make noise, distracted from lesson or begin to speak with others.’’. The screenshot of teacher demonstrated the reinforcement of students with online stickers in Figure 4.4.

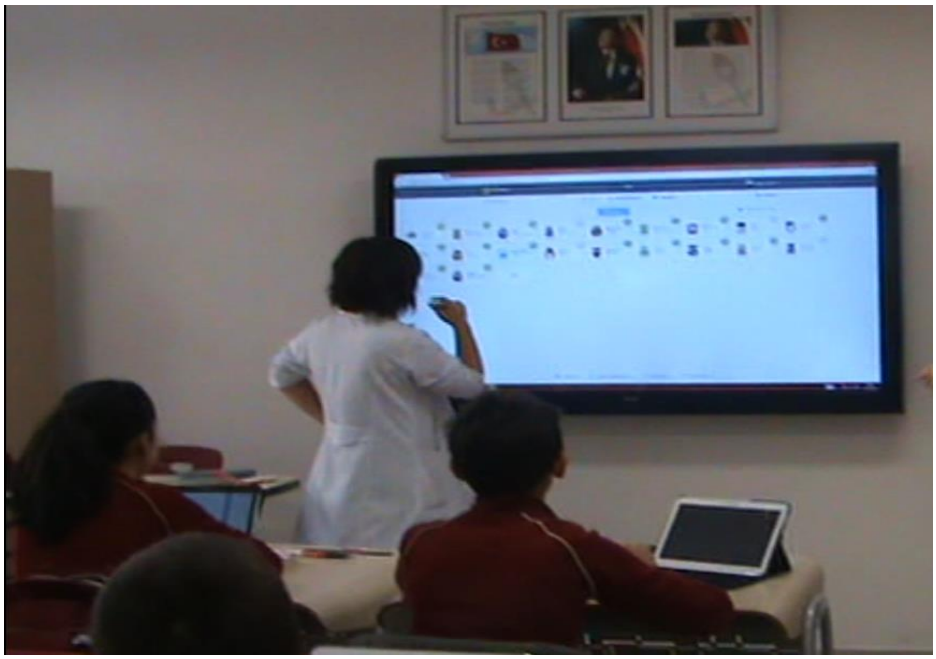

Figure 4. 4 The Screenshot of Reinforcing Students with an Online Application

Based on students' age and level the teachers also used online stickers to reinforce students and solve classroom management problems with technology. Four teachers indicated they reward students with online stickers in different applications either provided by school or founded by teachers. In videos, two teachers maintained that they used specific applications to reinforce students with online stickers.

4.3.4. Troubleshooting with Technological Problems

Unavailable Student Devices

Using technological devices in classroom environment revealed some technology depended problems. One of these problems was unavailability of students' devices. The two main problems articulated by the teachers as charging of the tablets and students' forgetting to bring their tablets into the classroom. The videos also showed the unviable students devices in classroom environment. Some students did not have tablets or some of them had tablets being out of charge.

Four of these teachers reported that the charging problems of students' tables were one of the important deficiencies to go on the lesson. In their videos, in three teachers' classrooms this problem revealed. One of the teachers was Emmy. She reflected that:

> Because these are technological tools, I mostly meet with the tablets' charge problems. These students were not older, so they played games or looked at their social media accounts and of course batteries of these devices become off. Actually classrooms haven't got enough plugs. One or two students could charge their tablets others have to wait.

The second problem in the classroom for students' devices was forgetting to bring their tablet. Three of the teachers reflected this problem and in their video recorded lessons one teachers' classroom environment could be observed. Mina said that:

> At the beginning of the year, especially the students were not used to bring their tablets. In that reason, I faced with many problems. Because most of my students did not have any tablets and they could not open e book or send answers to smart education. However, this problem went away after students were accustomed to bring their tablets for lessons.

The results of the study reflected that unavailability of students' tablets could cause some problems in active technology enhanced language learning environment. Besides these problems, the teachers articulated to develop some solutions to continuo their lessons.

Possible Solutions for Unavailable Student Devices

In order to create a solution for these problems teachers presented some different troubleshooting strategies. These strategies were making students matching with each other and continuing lesson by ignoring problem.

One of the solutions that teachers developed for students' unavailable devices was making students partners with each other, During videos of lessons, three teachers matched their students each other to use tablets together. Four teachers indicated that they matched students when necessary as Sarah reported that:

> My strategy is to match students each other to share their devices, I can say. Because sometimes students do not bring in their tablets classroom, tablets don't have charge or some connection problems of tablets with board. In these situations, I match the students each other to continue my lesson.

The second theme revealed from the study for troubleshooting with unviable devices was ignoring the problem. Videos and interviews revealed that the teachers could ignore the problem and continuous their lesson without technological tools. Three of these teachers reflected that they go on their lesson by ignoring the problem of unavailability of students' devices. Video recordings displayed two teachers ignoring the problem. The teacher Emmy also made a comment about this as ''When we have no way chance to open the devices of students or charge them, I went on my lesson with different actives as role playing or acting not to keep behind my plan and curriculum.''

The unavailability of students' devices could cause a problem for technology enhanced classroom settings. For this reason, the teachers should develop their tactics to deal with these situations. Two sub themes as matching students and ignoring the problem were referred with the study findings.

Software Breakdown

Using technological devices revealed different problems also stemming from software of technological devices. The three main problems voiced by teachers were smart board problems, calibration problems and setting of the page problems like writing pages or listening texts.

The first one was smart board problems. The teachers had to use only smart board in classrooms due to the lacking of whiteboard in the classroom; they faced mostly smart board problems. Four teachers articulated that the smart board could break down or had problems. Videos also demonstrated that four teachers also met these smart board problems. The teachers could not turn on or turn off properly the smart boards or the smart boards could give errors. For instance, the teacher Sarah met many times calibration problem in her video recorded lesson. John also revealed this problem as:

> In classrooms, we just have smart board to use and we have to do all our things and works on the smart boards. However, it could not work properly sometimes for example I cannot open e-book or my listening pages. The board gives error always.

Another important was the calibration problem of the smart board. The teachers could not turn on and turn off some pages because of freezing of the smart board. This situation caused that the smart pen and smart board calibration problems. In videos, three teachers clearly faced with this problem. The smart board had freezing problem and the teachers John and Sarah tried to deal with this problem in videos. Four teachers also articulated in their interview that they met with

calibration problems. One of these teachers was also Sarah. She reflected this problem as:

> While, I am writing something on smart board but the pen hinders me sometimes. I reported this problem a few times to technical support but I got no result. I cannot also change its settings. It blocks me and spends my time.

The last revealed software problem was setting of the pages' problem. The teachers reflected that they had some difficulties to setting writing or listening pages' problems. Videos revealed that two teachers had this problem. Three teachers also reported as Laura ''Actually, while using smart board I meet with some problems. One of them is to set the pages. When I open the smart education to write something it brings many problems as wrong pages.''

As summary, the software problems were very important for teachers. In that reasons they developed some tactics and strategies to overcome.

Possible Solutions for Software Breakdown

The teachers had also possible solutions when they faced with these problems. Teachers articulated three sub-themes to identify troubleshooting method that they developed different methods to deal with software problems such as making an individual ef fort, restarting, taking help from technological assistance service, software, asking students' help.

In lesson process, the first thing teachers did when they faced with a smart board problem was to make individual effort. They tried to solve the problem by closing and opening the certain pages, exercises, smart education and devices. They tried to send again and again to deal with the connection problems between tablets and smart board. In videos, four of these teachers had faced with software problems and first thing they did to make personal effort by their own. The teacher John tried to deal with problem on his own. In their interviews also all teachers indicated they tried to solve the problem firstly on their own. The teacher Mina indicated this situation as:

> The first thing that I do in face of technological problem is trying to fix on my own. At first, I try by closing and opening the pages or smart education. I wait a while and doing other activities. Then I restart the smart board.

The teachers exhibited mutual interaction with students, because learning and teaching was a mutual process. When a problem occurred in the classroom, the teachers also could ask help from their students. In videos, three teachers took to help from students when they did not resolve technical problems on their own. In their interview four teachers emphasized this theme. One of the teachers reflected this with her sentences, Laura:

> If I have problems about smart board, I want to deal with on by own, however when I cannot, I sometimes ask students like 'Do you have any similar problems before?' and 'How did you or your teacher solve this problem?' The students are generally volunteer to help. Because they are always engaged with technology in all parts of their life.

When teachers faced with a software problem in practical instruction, all teachers reported that they consulted to take help from technical support team in technological department of school when they did not overcome the problem. However; in videos did not reveal any example of taking help from technical assistance service of school. For about this theme John reflected that:

> In our school, we have technology department. When I face with a problem that I cannot solve as smart education, cloud or internet connectivity, I call for friends working technological department. Because some problems are not solvable for me and also students by myself.

In a nutshell, teachers underlined that they could overcame the network problems by themselves and with the help of students. However, they reflected that if occurring a complex problem stemming from connection management parts or uploading of the online materials, they of course could get help from technological support service.

Network Disconnection

Another frequently encountered problem of technological tools was network connection between smart education of board and tablets. Teachers reflected two main problems for network disconnection. They were selecting & sending problems on smart education program and connection problems as internet and devices.

The first referred problem for network disconnection was selecting and sending problems. Teachers named this problem depending on their experiences as they wrote on the board and tried to send to students' tablets, however, when occurred a connection problem so they failed to send. The selecting and sending problem was important because of to provide connection between smart board and tablets in the instructional process. Three teachers reported this problem. Videos displayed that three teachers faced with network disconnection problem in lesson. The Figure 4.5 showed the error page of selecting and sending problem with a screenshot to display the teachers' problem.

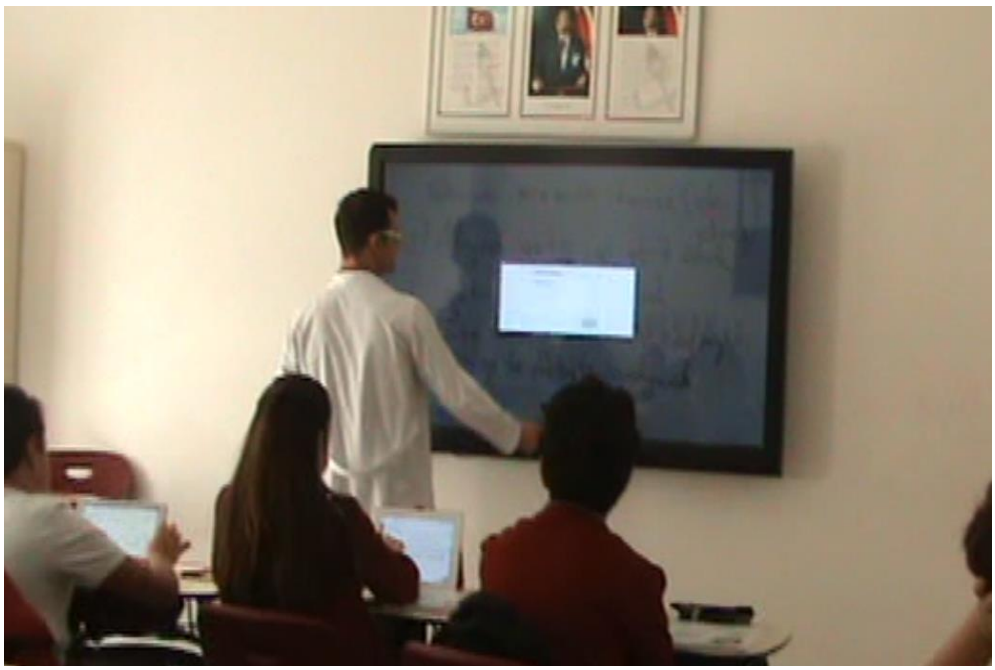

Figure 4. 5 Selecting and Sending Problems of the Documents

John reported:

> As you saw while video recording, I generally meet this problem. I am selecting the whole documents or writings and sending to students' tablets to save our time during instruction. But they cannot see my documents and the board gave error for sending of writings. There happened something and my it failed to send.

The second problem articulated by the teachers was connection problems. These connections problems included internet connection problems and smart education connection problems between board and tablets. Four teachers verbalized connection problems in their interviews. Outcomes of the videos showed that two teachers met connection problems during instruction. For instance, in videos Laura tried to open internet and smart education to make some examples to reinforce the students, however she faced with connection problems. Sarah indicated these problems as:

> I generally open some exercises from internet, but sometimes we have internet problems for example the video or the activity don't open properly. I also want to open smart education however for the connection problems the pages could not upload.

Laura reflected:

> In classroom, I open smart education. But I of course meet problems. The connection between tablets and board is one of them. How, I can explain, I want to make activity as answer and question activity or translation. I want students to send my smart education actively to give feedback but there arise connection problems stemming from internet or anything, I don't know.

Possible Solutions for Network Disconnection

When the teachers confronted with connectivity they demonstrated some troubleshooting strategies as resending the information and changing teaching strategy. Three teachers in lesson process had disabilities of connection between tablets and smart boards. They tried to send the information as writings on board,

pictures or screenshots again and again. One of the teachers was John. He faced with connection problem and tried to send his documents from smart board to students' tablets again and again. Also three teachers described this situation in their interviews. One of the teachers is Mina and she clarified as:

> In my lessons, as it was video recorded one, I generally have problems for selecting and sending information from board to tablets. As you saw, I try three or four times to send. There can occur some problems like this, and during lesson I try many things to solve like checking connection of tablets with students or sending again and again.

Secondly, with meeting of the connection problems, teachers changed their strategy when they couldn't solve the problem. Three teachers reported this and in videos just one teacher was observed to change teaching strategy. The teacher Laura did not get over the network disconnection problem to send writings to students. She gave some time students to note down the writings on their notebooks. This teacher Laura also expressed that:

> I write the grammar topic on the board and then try to send these students not to spend time. However, when I cannot send because of some unidentified problem, I give students some time and I begin to wait them to write the notes from board.

In conclusion, the findings of the study revealed that technology endowed various things for language learning environment. Notwithstanding, the technology caused different problem if broken down especially in their school. Because the fact that in their school the teachers had no any way to go on teaching and learning possibilities without technological devices especially smart boards, these problems and their solutions had crucial importance to continue teaching.

4.3.5. Technology Based Assessment

The last part of the design was technology based assessment process. The assessment process was not apart from the actual teaching process. In this section, the teachers assessed the students by using integrated technology.

The first assessment way of students was to evaluate students with the usage of online tools and programs. The teachers assessed the students with the help of sending question to students sentences and taking answers. And they monitored students learning by online exercises. During their lessons three teachers were observed by using online tools. All teachers also articulated that they used online assessment tools in and out of the classroom. the teacher Emmy reflected that ‘‘The materials, I use in my lesson like e-book and uploaded exercises, have evaluation parts also to see lesson learning. I send questions to students and take answers during activity.’’

Another important theme for assessment was to control language skills. The teachers verbalized that they pursued the language skills with the help of technology as reading, writing and listening. Three teachers used assessing materials in their video recorded lessons. Four teachers also articulated they used technology to evaluated the development of skills. Mina reflected:

> Of course I evaluate my students’ language skills. For example, supposing that at the end of the unit I have a song. End of the lesson, I open a song and ask them they can understand or not for listening, I want to note down some specific words from the songs for writing.

Sarah reported:

> To evaluate skills, I just sometimes for writing activities on tablet or for reading skill I sent them a very short story or dialogues to their tablets and want them to read them soundly by selected students. With this way, I can also develop different skills together.

Since teachers could use technology enhanced teaching and assessments both in and out of the classrooms, the teachers also gave students homework through these online platforms that provided by school and founded by teachers. Four teachers mentioned that they sent online homework on smart education or cloud education platforms. The video outcomes revealed two teachers sending

online homework and exercises at the end of the lesson. The teacher John articulated that:

> Because of my students' age and level, I lectured my lesson and made some exercises in the classroom from e-book. However not to spend more time I give them many different exercises as homework by sending smart education mostly focus on developing skills as speaking.

For the assessment of the learning, the teachers made online quizzes or tests with the help of technology. Three teachers reflected in their interviews that they could assessed students' online quizzes or tests while one teacher applied online quizzes during video recorded lesson process. Laura described that:

> Yes, yes. I can evaluate the students also with their tablets. I can send them some quizzes or exercise to test their learning from YPL. Sometimes, I send at the end of the lesson but sometimes I send at the evening to do at their homes, it can change about my time.

Eventually, assessment was not only formal implementation; the teachers also articulated to assess their students' learning during instruction with different activities supported by technology as a part of active teaching process.

4.4. Summary of the Results

Results revealed some important reasons for English language teachers to integrate technology into their learning environments. These reasons included six main categories such as enriching lessons, increasing students' motivation, providing permanent learning, offered technological opportunities, addressing all senses and developing language skills. The findings also revealed a design for technology enhanced ELT classrooms.

The design comprised of two main parts as lesson design and actual teaching. Lesson design presented the preparing and planning parts while actual teaching included practical teaching process during instruction by using technology actively. Lesson design process consisted four main themes to design teachers' lessons by

considering technology integration reported by the teachers as technology selection, lesson planning, preparing materials and planning assessment. The actual teaching process reflected teachers' technology integration in their instruction actively. This section presented the teachers' behavioral indicators of TPACK through using technology actively in their language teaching environment. In actual teaching, data analysis represented five main themes to use technology actively. These themes were lesson entry behaviors, technological teaching strategies in ELT, technology enhanced classroom management, troubleshooting with technological problems and technology based assessments. The Figure 4.6 summarized the TPACK design of English language teachers.

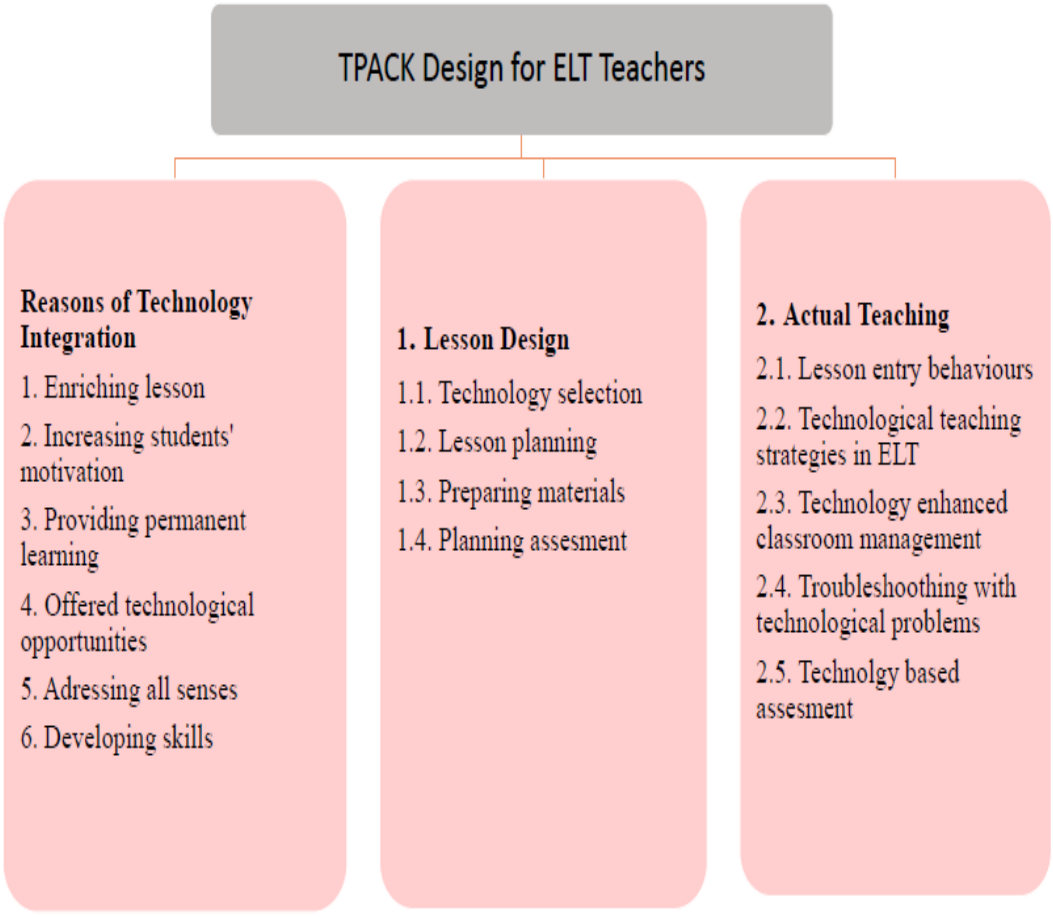

Figure 4. 6 Summary of TPACK Design for ELT Teachers

CHAPTER 5

DISCUSSION

The main purpose of this study was to find out the English language teachers' behavioral indicators of TPACK, generate a design for both before and during instruction and reveal the reasons that push the teachers to use technology in their classroom environment based on TPACK components. The design of the study was case study applied as video study method in a private school, Turkey. In data collection process, data context included the school, which the study was conducted, and the teachers, using enhanced technology actively in their lessons, due to adopting technology in teaching and learning as smart and cloud education. The participants of study were five English language teachers in this private school and selected by purposive sampling. While designing this study, the researcher took into consideration behavioral indicators of the English language teachers' TPACK identified by implanting video study method which was lack of the literature. Pre and post-video interviews triangulated the video recorded data. The teachers' behaviors and actions from the video recording lessons and interviews were analyzed to delineate English language teachers' TPACK behavioral indicators.

In the literature, after Mishra and Kohler's (2006) description of TPACK framework, researchers begin to implement various studies to examine and define TPACK concepts of teachers on different fields. However, the definition of the concepts became a discussion about being fuzzy (Graham, 2011). The literature emphasized on the definition of TPACK constructs which were not conceptual and their relationships rather than respective definitions should be taken into consideration started to be verbalized by researchers. Many researchers suggested that the TPACK framework should be formed in conceptual and related constructs rather than individual concepts (Angeli & Valanides, 2008; Canbazoğlu Bilici,

Guzey & Yamak, 2016). This current study declared the TPACK indicators of English language teachers based on transformative model in the context of ELT classroom environment rather than reflecting the components of TPACK separately, suggested by researchers because of having holistic and corresponded viewpoints (Niess, 2005; Koehler, Mishra & Yahya, 2007; Angeli & Valanides 2009; Jang & Chen, 2010). The outcomes of the study generated the instructional constructs as lesson design and actual teaching based on movements of teachers in videos and enunciations from pre and post interviews. The TPACK indicators were examined by regarding whole process comprising lesson planning, teaching and assessment steps. The study also showed that TPACK components should be looked as embodied terms in a certain context rather that defining separately.

The findings of the study also demonstrated clearly that the teachers participating the case study adopted technology in their lessons taking in hand some different reasons. These reasons mostly determined teachers' usage rates through integrating technology in their lesson. According to Mazman and Koçak Usluel (2011) internal and external factors like students' or teachers' needs and provided technological infrastructure could affect the technology integration process of teachers. Actually, on the grounds of this study's findings, the main reason for technology integration on lesson process was because of offered technological opportunities like interactive smart boards and tablets and online materials by the school management as a school policy. However, as Chen (2010) advocated that teachers used technology mainly due to the fact that they wanted to address students' needs based on their level, age and learnings to reinforce and develop skills. Similarly, it was clear that the teachers mentioned mostly that students were very willing and motivated to use technology in lesson process as they saw technology part of their lives. This study's results were in line with Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur and Sendurur (2012) conclusions through reasons for integrating technology as enriching learning environment, facilitating learning and developing skills. As regarded from the results of this study, the

technology integration reasons were depending on different factors based on context, needs of students or thoughts of teachers.

The findings of study constructed and clarified the lesson design process. The technology usage during instruction was not just only using technology lesson process, it also included before, during and after instruction process (Mouza & Karchmer-Klein, 2013). Because of technology requires a huge burden for schools and teachers for the economic expense and time, the technology usage planning is of vital importance (Gülbahar, 2007). This study pointed out that the usage of technology requires preparation before instruction. In virtue of results of the study, the data from teachers denominated the lesson design. In the lesson design process, the teachers mentioned different planning parts to comprise of whole lesson. Technology selection was leading of this process, since teachers had plenty of alternatives for technology in order to use language learning. As articulated also by Bozdoğan and Özen (2014) that teachers took into consideration the needs, assumptions, experiences and characteristics while determining technology in classroom. Hofer and Harris (2011) represented on this point that the selected technology should be appropriate with the activities and objectives of the curriculum in every context also. The study reflected that the teachers should regard different properties of technology like interface, efficacy, relevance with curriculum and satisfying of the students' needs as both personal and educational.

The findings of study revealed lesson planning step also as an important part of lesson design in this study because of methods, strategies, subjects and objectives of the lesson. The current study showed that the curriculum specified the technology enhanced instruction design and process. As Ertmer et al. (2012) clarified the usage of technology in the classroom was very related to curriculum including of learning and teaching methods pushing teachers to use technology. From this viewpoint, Dudeney (2000) suggested that the teachers gave place preparing materials with technology in lesson design process by taking into consideration the target group,

content and etc. Because of emphasis on the lack of evaluation methods of technology based learnings by Alexander and Hedberg (1994), the data analysis of the study presented also that planning assessment part of lesson design was for both in and out of the classroom. The findings of this study showed that the teachers should design and plan the development of language skills and learnings and how students could be evaluated with integrating technology.

The study also reinforced that TPACK indicators of teachers could differ in different fields by various studies (Hughes, 2013; Yeh, Hsu, Wu, Hwang & Lin, 2014). The indicators articulated in the literature mainly depended on TPACK definitions of elements. Many studies conducted for TPACK indicators, mostly based on the analysis of surveys items. The study built the findings on teachers' movements and actions observed from videos and reports from interviews. As concluded, teachers' interviews proved the teachers' behavioral indicators. Yeh et al. (2014) demonstrated in the way that the teachers' behavioral indicators of TPACK were observed in practical teaching process composing of technology integrated instruction, they articulated this framework as TPACK-P. By means of the findings of the study, considering their practical TPACK framework composed the actual teaching design.

This study underlined that instruction also blended with technology began with lesson entry behaviors as checking technological tools, gaining attention and taking online attendance, which before done by teacher not integrating technology or smart education. Yeganehpour and Takkac (2016) stated that teachers used various activities and strategies to attract students' attention at the beginning of the lesson to focus students on lesson in language learning environments. As Duhaney (2000) advocated the teachers could not truly change their methods and strategies, instead they used technology by integrating existing methods and enriching them in learning environment rather than adapting new teaching approaches. Eteokleous (2008) also eemphasized that the teachers used the technological tools by

compounding traditional methods with technology. In this context, deduced from the results of the study that the teachers adopted technology in their lesson by not changing their methods but embedding technology in actual teaching process. Similarly, Harris and Hofer (2009) agreed with this argument by reflecting that technology based activities during instruction could help teacher to diversify and activate learning environment thanks to technological tools, materials and activities. The outcomes of the study demonstrated also that technology enhanced strategies developed and used by teachers to strength the learnings were also varied and implanted with existent methods.

Shumin (2002) clarified that students' interaction with teacher and each other through the lesson was important for language acquisition. However, Cabaroğlu (2012) clarified that the classroom management problems arouse generally in Turkish context language learning environments. For the classroom management in technology enhanced learning environments, Leidner and Jarvenpaa (1995) declared that using technology during instruction introduced new problems in classroom environment, besides its benefits. This study explained that teachers tried to overcome different classroom management problems stemming from technology used in classroom as creating distracted students and noisy classroom environment. The study also mentioned that various classroom management solutions articulated and observed from teachers as changing the settings of technological devices to make more distinguishable, giving feedback from tablets to activate students' participation in lesson, focusing students and gaining attention by motivating with technology, making students groups for technology based exercises especially for interaction and giving online reinforcement and rewards like giving stickers or points with different technological tools and applications.

According to video recordings and interviews' data, another important implication of study also was that technology brought technological problems into

the class as lack of tablets of students, breakdown of tools or network disconnection. As Groff and Mouza (2008) articulated that using technological devices could create deficiencies arising from hardware, software or infrastructure systems described as very natural for technology. The teachers faced these problems during instruction and they were obligated to overcome these problems with applying and developing different strategies depending on the variety and size of the problem. The teachers found out troubleshooting with different solutions for technological problems as suggested in this study.

The participants of study recommended the main solution of to repair technological problems as trying by own, taking from help both students and technical department to deal with. In this direction, Zandvliet and Fraser (2004) profounded that technological deficiencies stemming from technological tools or software programs could be observed in technology integrated classrooms, and the teachers should take an active role as being facilitator and executer with different developed strategies and tactics based on varying classroom contexts and problems. The outcomes of the study also articulated some strategies and tactics to deal with problems as matching students with each other or continuing lesson without use technological devices. For the software breakdowns, the teachers also exhibited various tactics as making individual effort, asking help from students or if they did not overcome the problems as a last step taking help from technical support team. In the classroom environment faced with network connection problems and the teachers trying to resend again and again and lastly change the teaching strategy if they cannot overcome these problems.

The assessment step is essential for teaching and learning process to evaluate the learning objectives. In classrooms, the assessment of today's class and learning environments cannot be considered separated from teaching process. In this study, assessment is given in actual teaching process. With the technology integration into instruction, the assessment procedure became to change and be

more technology centered (Gipps, 2005); from this point of view technology based assessment was verbalized in the current study because of assessment in technology enhanced classrooms required technological pedagogical knowledge to determine what the learnings are and how the learning process continue. With the implications of Jones and Moreland also (2005) defined that assessment was a part of pedagogical content knowledge due to being dynamic and interactive process, this study presented that assessment was not put separated from TPACK framework in technology enhanced classrooms.

In addition, Yeh et al. (2014) concluded that technology based assessment the teachers used online technological tools like specific programs or immediate feedback applications instead of traditional test formats to both evaluate learnings and manage the classroom environment and students' interaction at the same time. This current study supported these judgements by drawing attention to online assessment techniques used by teachers like using online tools for giving homework, assessing skills by technology and making interactive tests and quizzes of students during instruction. Hiltz and Turoff (2002) also overemphasized that encouraging the students to join the lesson with appropriate software programs or applications as feedbacks, quizzes and tests was one of the important way of providing students' active participation in lesson and evaluation of the learning process. As summary, the technology based assessment was one of the crucial part of technology enhanced education transpiring in in classroom environment by supporting Yeh at al. (2014) with articulating TPACK-P framework.

Jen, Yeh, Hsu, Wu and Chen (2016) advocated that teachers could exhibit different indicators in their active teaching environment differently from they reported in their interviews or surveys. The outcomes of this study comprised of both teachers' pre and post-video interviews and their video recorded lessons. The study enabled to examine and evaluate the teachers reported sentences depending on their interviews and their active instruction based on video recordings in

classrooms. Jen et al. (2016) also suggested to observe teachers' active instruction process to clarify their technology integration to explain practical TPACK indicators. Mainly, the actual teaching design part consisted of behavioral indicators of TPACK included both teachers' movements while using technology actively and their comments about integrating technology in their language teaching environment. The study generally showed parallel outcomes between teachers' interviews and their video recording indicators. However, the findings revealed a bit differences that although teachers reported some indicators in their interviews, they did not exhibit in their videotaped lesson process.

One of these indicators was taking online attendance with technological possibilities as smart education or specific applications, teachers reported to take attendance actively; however, findings of video recordings revealed that few of them took attendance at the beginning of their lessons. Another significant difference between the reported and observed indicators were mainly for using specific platforms in their lessons. For example, teachers reported to use Your Learning Place (YLP), fewer teachers used during instruction. Likewise, although the teachers acknowledged to use Service Based Management System (STOYS) and Scholastic learning zone platforms as language learning applications, none of them actively used these platforms in video recorded lesson process.

The sub theme, the trouble shooting with technological problems, also had an unobservable indicator. Although all teachers emphasized that they got help from technical support team in case of technological problems during instruction, analysis of videos showed that none of them tried to take help from technological support them. Also for changing their strategy indicator, despite explained by three teachers, just one teacher changed teaching strategy due to technological problem. Lastly, for assessment part, teachers generally emphasized to evaluate students with technological possibilities, the videos reflected less online assessment activities like sending online homework and making online quizzes than reported by teachers.

Yeh et al. (2014) reported that teachers could have differences between their reported sentences and actual teaching process because of lacking the possibility of active technology usage in their classroom environment. As they mentioned, some reasons could affect the technology integration process. Especially, this study had one video recorded lesson for each teacher. The study could not have possibility to observe teachers' all reported indicators.

CHAPTER 6

CONCLUSIONS

With the video case study outcomes, the TPACK design for English language teachers in learning environment was designed by the researcher. In study also, the reasons that why the teachers integrate technology in their lessons were also revealed and clarified in the light of findings. It was contributed for the literature that rather than only teachers' reports and articulations about using technology and TPACK indicators in the classroom environment, real instruction process and technology active usage were observed and analyzed from video recordings in ELT classrooms. The study generated a TPACK design to define behavioral indicators for English language teachers based on both video recordings including teachers' movements and pre and post interviews comprising teachers' audios. In this design, the teachers TPACK concepts were clarified by separated in two step as instructional design and actual language teaching. Instead of a given as a divided section, the assessment part is embedded in actual teaching process, which differs from the literature picturized.

6.1. Implications for Practice

This study had a unique design by conducting video case study in real classroom settings in a private school. The technology integrating in teachers' lessons were observed by video recordings and reported by interviews. The TPACK behavioral indicators of English language teachers were presented and a Design for language teaching classrooms was generated. Based on the results of the study, also some reasons for technology integration into classroom environment for ELT teachers were clarified. Considering all of these, the design can be used in technology enhanced classroom which technology and technological tools and materials used actively.

English language teachers' behavioral TPACK indicators were important in field. From this result, TPACK behavioral indicators were present especially for in-service English teachers using technology actively. With the given behavioral indicators of TPACK, the TPACK concept can be identified more deeply based on active language instruction. And based on the results of this study, by taking into considerations of technology integration reasons, some in-service teachers' technology education programs should be used to integrate technology into classrooms more actively.

6.2. Recommendations for Future Research

This study created a unique design for TPACK framework in language learning environment and designated behavioral indicators of English language teachers. Therefore, this study was conducted in the private school which was adapting technology based learning for all fields with specific smart and cloud integrated software education. Generally, in this private school, school management gave extra importance for technology integrated teaching and English language learning by supporting language learning with various particular language learning online and interactive programs, applications and platforms to develop language skills and learning outcomes. The findings of the study can be specific and may not be generalized both for all schools and English language learning environments.

Secondly, this study was applied with five English language teachers worked in this private school and 4^{th}, 5^{th}, 7^{th} and 9^{th} class level of students participated. For the further research studies can be enriched with more variety of in number classrooms environments and teachers can be interviewed, observed and video recorded in different schools and contexts in order to examine and evaluate in a wide perspective of English teachers' TPACK behavioral indicators. Document analysis as curriculum of the school, teachers' notes and students' online documents can be applied to reinforce and support the outcomes of the study.

Moreover, in this study, teachers were observed throughout one lesson process. Resulting from this, more technology enhanced active lessons should be video recorded in order to strengthen behavioral TPACK indicators, because teachers may not use technological devices adequately depending on certain factors as topics and objectives of lesson, activities, some problems or other undefined reasons. To take detail implications for results depending on technology usage, the researchers can observe and take place also learning environment personally, they can spend a more time with teachers in school and take depth information schools' educational policies.

REFERENCES

Al-Bataineh, A. & Brooks, L. (2003). Challenges, advantages, and disadvantages of instructional technology in the community college classroom. *Community College Journal of Research &Practice, 27*(6), 473-484.

Alonzo, A. C., Kobarg, M. & Seidel, T. (2012). Pedagogical content knowledge as reflected in teacher–student interactions: Analysis of two video cases. *Journal of Research in Science Teaching*, 49(10), 1211-1239.

Alexandre, S. & Hedberg, J., G. (1994). Evaluating technology-based learning: Which model? *Interactive Multimedia in University Education: Designing for Change in Teaching and Learning, 59*(1), 233-244.

Angeli, C. & Valanides, N. (2008*). TPCK in pre-service teacher education: Preparing primary education students to teach with technology*. Paper presented at AERA Annual Conference, New Yor*k*.

Angeli, C. & Valanides, N. (2009). Epistemological and methodological issues for the conceptualization, development, and assessment of ICT–TPCK: Advances in technological pedagogical content knowledge (TPCK). *Computers & Education, 52*(1), 154-168.

Baxter, J. A. & Lederman, N. G. (1999). Assessment and measurement of pedagogical content knowledge. In J. Gess-Newsome & G. L. Lederman (Eds). *Examining pedagogical content knowledge: The constructs and its implications for science education* (pp. 147-161). Netherlands: Kluwer Academic Publishers.

Borko, H., Koellner, K., Jacobs, J. & Seago, N. (2011). Using video representations of teaching in practice-based professional development programs. *ZDM Mathematics Education, 43*(1), 175-187.

Bozdoğan, D. & Özen, R. (2014). Use of ICT Technologies and factors affecting pre-service ELT teachers' perceived ICT self-efficacy. *Turkish Online Journal of Educational Technology (TOJET)*, *13*(2), 186-196.

Brückmann, M., Duit, R., Tesch, M., Fischer, H., Kauertz, A., Reyer, T., Gerber, B., Knierim, B. & Labudde, P. (2007). The potential in research on teaching and learning science. *Contributions from science education research*. Netherlands: Springer.

Cabaroğlu, N. (2012). Prospective EFL teachers' perceptions of classroom management and misbehavior. *Çukurova University Faculty of Education Journal*, *41*(1), 117.

Canbazoğlu Bilici, S., Guzey, S. S. & Yamak, H. (2016). Assessing pre-service science teachers' technological pedagogical content knowledge (TPACK) through observations and lesson plans. *Research in Science & Technological Education*, *34*(2), 237-251.

Chen, C. H. (2010). The implementation and evaluation of a mobile self-and peer-assessment system. *Computers & Education*, *55*(1), 229-236.

Chien, C. W. (2015). Analysis of Taiwanese undergraduates' learning and development of TPCK in English instruction. *International Journal of Teaching and Case Studies*, *6*(3), 212-230.

Coniam, D. (2001). The use of audio or video comprehension as an assessment instrument in the certification of English language teachers: A case study. *System*, *29*(1), 1-14.

Cox, S. M. (2008). *A conceptual analysis of technological pedagogical content knowledge*. (Unpublished doctoral dissertation). Bingham Young University, Provo.

Cox, S. & Graham, C. R. (2009). Using an elaborated model of the TPACK framework to analyze and depict teacher knowledge. *TechTrends*, *53*(5), 60-69.

Creswell, J. W. (2007). *Qualitative inquiry and research design - choosing among five approaches* (2nd ed.). United States of America: Sage Publications, Inc.

Cuban, L. (2000). *So much-tech money invested, so little use and change in practice: How come?* Paper presented at The Council of Chief State School Officers' Annual Technology Leadership Conference, January, Washington, DC

Derry, S. J., Pea, R. D., Barron, B., Engle, R. A., Erickson, F., Goldman, R., ... & Sherin, B. L. (2010). Conducting video research in the learning sciences: Guidance on selection, analysis, technology, and ethics. *The Journal of the Learning Sciences*, *19*(1), 3-53.

Dinçay, T. (2010). A quick chronological review of the ELT methods along with their techniques and principles: choosing eclecticism from among language teaching methods. *Dil Dergisi*, *147*(1), 40-62.

Doering, A., Veletsianos, G., Scharber, C. & Miller, C. (2009). Using the technological, pedagogical, and content knowledge framework to design online learning environments and professional development. *Journal of Educational Computing Research, 41*(3), 319-346.

Dudeney, G. (2000). *The Internet and the language classroom: A practical guide for teachers*. UK: Cambridge University Press.

Dudeney, G. & Hockly, N. (2012). ICT in ELT: How did we get here and where are we going? *ELT Journal, 66*(4), 533-542.

Duhaney, D. C. (2000). Technology and the educational process: Transforming classroom activities. *International Journal of Instructional Media*, *27*(1), 67.

Elmendorf, D. C. & Song, L. (2015). Developing indicators for a classroom observation tool on pedagogy and technology integration: A Delphi study. *Computers in the Schools, 32*(1), 1-19.

Erickson, F. (2006). Definition and analysis of data from videotape: Some research procedures and their rationales. In J. L. Green, G. Camilla & P. B. Elmore, *Handbook of complementary methods in education research*. (pp. 177-192). United States of America: Lawrence Erllbaum Associates, Inc.

Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E. & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers & Education, 59*(2), 423-435.

Eteokleous, N. (2008). Evaluating computer technology integration in a centralized school system. *Computers & Education, 51*(2), 669-686.

Fraenkel, J. R., Wallen, N. E. & Hyun, H. H. (2012). *How to design and evaluate research in education.* New York: McGram-Hill Companies.

Fryling, M. (2013). *Bridging the divide: Second language teachers, pedagogy, content knowledge, and technology*. (Unpublished doctoral dissertation). Wayne State University, Detroit.

Gilakani, A.P. (2012) 'EFL teachers' beliefs toward using computer technology in English language teaching', *Journal of Studies in Education, 2*(2), 62–80.

Gipps, C. V. (2005). What is the role for ICT based assessment in universities? *Studies in Higher Education, 30*(2), 171-180.

Golonka, E. M., Bowles, A. R., Frank, V. M., Richardson, D. L. & Freynik, S. (2014). Technologies for foreign language learning: a review of technology types and their effectiveness. *Computer Assisted Language Learning, 27*(1), 70-105.

Graham, C. R. (2011). Theoretical considerations for understanding technological pedagogical content knowledge (TPACK). *Computers & Education*, *57*(3), 1953-1960.

Groff, J. & Mouza, C. (2008). A framework for addressing challenges to classroom technology use. *Association for the Advancement of Computing in Education Journal, 16*(1), 21-46.

Gülbahar, Y. (2007). Technology planning: A roadmap to successful technology integration in schools. *Computers & Education*, *49*(4), 943-956.

Guzey, S. S. & Roehrig, G. H. (2009). Teaching science with technology: Case studies of science teachers' development of technology, pedagogy, and content knowledge. *Contemporary Issues in Technology and Teacher Education*, *9*(1), 25-45.

Güven, İ. (2012). The 4+4+4 school reform bill and the Fatih project: Is it a reform? *İlköğretim Online, 11*(3), 556-577.

Hilton, J. (2006). Why the new media and technologies matter? *The Edutech Report: The Education Technology Newsletter for Faculty and Administrations*, *22*(5).

Hiltz, S. R. & Turoff, M. (2002). What makes learning networks effective? *Communications of the ACM, 45*(4), 56-59.

Hockly, N. (2013). Digital technologies in low-resource ELT contexts technology for the language teacher. *ELT Journal*, *68*(1), 79-84.

Harris, J. & Hofer, M. (2009). Grounded tech integration: An effective approach based on content, pedagogy, and teacher planning. *Learning & Leading with Technology, 37*(2), 22-25.

Harris, J. B. & Hofer, M. J. (2011). Technological pedagogical content knowledge (TPACK) in action: A descriptive study of secondary teachers'

curriculum-based, technology-related instructional planning. *Journal of Research on Technology in Education, 43*(3), 211-229.

Hughes, J.E. (2000). *Teaching English with technology: exploring teacher learning and practice*. (Unpublished doctoral dissertation). Michigan State University, Michigan.

Hughes, J. E. & Scharber, C. M. (2008). Leveraging the development of English TPCK within the deictic nature of literacy. In AACTE (Eds.), *The handbook of technological pedagogical content knowledge for educators*. (pp. 87-106). UK: Routledge / Taylor & Francis Group for the American Association of Colleges of Teacher Education.

Hughes, J. E. (2013). Descriptive indicators of future teachers' technology integration in the PK-12 classroom: Trends from a laptop-infused teacher education program. *Journal of Educational Computing Research, 48*(4), 491-516.

Jang, S. J. & Chen, K. C. (2010). From PCK to TPACK: Developing a transformative model for pre-service science teachers. *Journal of Science Education and Technology, 19*(6), 553-564.

Jang, S. J. & Tsai, M. F. (2012). Exploring the TPACK of Taiwanese elementary mathematics and science teachers with respect to use of interactive whiteboards. *Computers & Education, 59*(2), 327-338.

Jen, T. H., Yeh, Y. F., Hsu, Y. S., Wu, H. K. & Chen, K. M. (2016). Science teachers' TPACK-Practical: Standard-setting using an evidence-based approach. *Computers & Education, 95*, 45-62.

Jones, A. & Moreland, J. (2005). The importance of pedagogical content knowledge in assessment for learning practices: A case-study of a whole-school approach. *The Curriculum Journal, 16*(2), 193-206.

Kaleli Yılmaz, G. (2015). Analysis of technological pedagogical content knowledge studies in Turkey: A meta-synthesis study. *Education and Science, 40*(178), 103-122.

Katz, S. N. (2005). Why technology matters: the humanities in the twenty-first century. *Interdisciplinary Science Reviews*, *30*(2), 105-118.

Knoblauch, H., Baer, A., Laurier, E., Petschke, S. & Schnettler, B. (2008). Visual analysis. New developments in the interpretative analysis of video and photography. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, *9*(3).

Koçoğlu, Z. (2009). Exploring the technological pedagogical content knowledge of pre-service teachers in language education. *Procedia-Social and Behavioral Sciences*, *1*(1), 2734-2737.

Koehler, M. J. & Mishra, P. (2008). Introducing technological pedagogical knowledge. In AACTE (Eds.), The *handbook of technological pedagogical content knowledge for educators*. (pp. 3-30). UK: Routledge / Taylor & Francis Group for the American Association of Colleges of Teacher Education.

Koehler, M. J., Mishra, P. & Yahya, K. (2007). Tracing the development of teacher knowledge in a design seminar: Integrating content, pedagogy and technology. *Computers & Education, 49*(3), 740-762.

Koehler, M. & Mishra, P. (2009). What is technological pedagogical content knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education, 9*(1), 60-70.

Kurt, G., Mishra, P. & Kocoglu, Z. (2013). Technological pedagogical content knowledge development of Turkish pre-service teachers of English. In *meeting of the society for information technology and teacher education,* New Orleans, LA. Retrieved from

http://gokcekurt.com/wp-content/uploads/2012/02/Kurt-Mishra-SITE2013-paper.pdf

Leidner, D. E. & Jarvenpaa, S. L. (1995). The use of information technology to enhance management school education: A theoretical view. *Special Issue on IS Curricula and Pedagogy*, *19*(3), 265-291.

Lightbown, P. M. & Spada, N. (2013). *How languages are learned* (4th ed.). Oxford University Press.

Lincon, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage Publications.

Liu, M., Moore, Z., Graham, L. & Lee, S. (2002). A look at the research on computer-based technology use in second language learning: A review of the literature from 1990–2000. *Journal of Research on Technology in Education, 34*(3), 250-273.

Liu, S., Liu, H., Yu, Y., Li, Y. & Wen, T. (2014). TPACK: A new dimension to EFL teachers' PCK. *Journal of Education and Human Development*, *3*(2), 681-693.

Lubis, M. A., Yunus, M. M. & Embi, M. A. (2010). ICT and systematic steps in teaching and learning language in the classroom. *Procedia-Social and Behavioral Sciences*, *9*, 1055-1061.

Masats, D. & Dooly, M. (2011). Rethinking the use of video in teacher education: A holistic approach. *Teaching and Teacher Education, 27*(7), 1151-1162.

Mazman, S. G. & Usluel, Y. K. (2011). Bilgi ve iletişim teknolojilerinin öğrenme-öğretme süreçlerine entegrasyonu: Modeller ve göstergeler. *Eğitim Teknolojisi Kuram ve Uygulama, 1*(1), 62-79.

Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook.* United States of America: Sage Publications.

Milli Eğitim Bakalnlığı (MEB), (2013). *Talim ve terbiye kurulu başkanlığı ilköğretim kurumları (ilkokullar ve ortaokullar) İngilizce dersi (2, 3, 4, 5, 6, 7 ve 8. sınıflar) öğretim programı.* Ankara. Retrieved from

http://ttkb.meb.gov.tr/www/guncellenen-ogretim-programlari/icerik/151

Milli Eğitim Bakanlığı (MEB), (2012). *Güncellenen eğitim programları.* Retrieved from

http://ttkb.meb.gov.tr/www/guncellenen-ogretim-programlari/icerik/151

Mishra, P. & Koehler, M. J. (2003). Not "what" but "how": Becoming design-wise about educational technology. In Y. Zhao (Ed.), *What teachers should know about technology: Perspectives and practices* (pp. 99–122). Educational Technology Publications. Retrieved from

http://www.profmoe.com/Week1_MishraKoehler_NotWhatHow.pdf

Mishra, P. & Koehler, M. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *The Teachers College Record*, *108*(6), 1017-1054.

Mishra, P. & Koehler, M. J. (2007). *Technological pedagogical content knowledge (TPCK): Confronting the wicked problems of teaching with technology.* Paret presented at Society for Information Technology & Teacher Education International Conference, *1*, 2214-2226.

Merriam, S. (2002). *Qualitative research in practice: Examples for discussion and analysis.* San Francisco: John Wiley & Sons, Inc.

Mora, R. A. (2011). *Challenges and opportunities for literacy and technology in ELT teacher education*. Keynote Presentation, The 2nd Colloquia on Research and Innovation in Foreign Language Education. Universidad de La Salle, Bogota.

Mouza, C. & Karchmer-Klein, R. (2013). Promoting and assessing pre-service teachers' technological pedagogical content knowledge (TPACK) in the context of case development. *Journal of Educational Computing Research*, *48*(2), 127-152.

Mouza, C. & Lavigne, N. C. (2013). Introduction to emerging technologies for the classroom: A learning sciences perspective. In C. Mouza & N. C. Lavigne (Eds). *Emerging technologies for the classroom.* (pp. 1-12). New York: Springer.

Niess, M. L. (2005). Preparing teachers to teach science and mathematics with technology: Developing a technology pedagogical content knowledge. *Teaching and Teacher education, 21*(5), 509-523.

Niess, M. L. (2011). Investigating TPACK: Knowledge growth in teaching with technology. *Journal of Educational Computing Research*, *44*(3), 299-317.

Öz, H. (2015). Assessing pre-service English as a foreign language teachers' technological pedagogical content knowledge. *International Education Studies*, *8*(5), 119.

Patton, M. Q. (2002). *Qualitative research & evaluation methods*. United States of America: Sage Publications, Inc.

Rienties, B., Brouwer, N. & Lygo-Baker, S. (2013). The effects of online professional development on higher education teachers' beliefs and intentions towards learning facilitation and technology. *Teaching and Teacher Education, 29*, 122-131.

Rodriguez-van Olphen, M. M. C. (2002*). Integrating technology into the foreign language teacher education curriculum: A phenomenological study*. (Unpublished doctoral dissertation). Purdue University, West Lafayette.

Schmid, E. C. (2008). Potential pedagogical benefits and drawbacks of multimedia use in the English language classroom equipped with interactive whiteboard technology. *Computers & Education, 51*(4), 1553-1568.

Tai, S. J. D. & Chuang, H. H. (2012). *TPACK-in-action: An innovative model to help English teachers integrate CALL.* Paper presented at Proceedings of

International Conference on Computers in Education, November 26-30, Singapore. Retrieved from

https://www.researchgate.net/profile/Shu_Ju_Diana_Tai/publication/259382424_TPACK-in- ec52b451f860363000000.pdf

Thompson, A. D. & Mishra, P. (2007). Breaking news: TPCK becomes TPACK! *Journal of Computing in Teacher Education*, *24*(2), 38.

Tondeur, J., Van Keer, H., van Braak, J. & Valcke, M. (2008). ICT integration in the classroom: Challenging the potential of a school policy. *Computers & Education*, *51*(1), 212-223.

Savaş, P. (2012). Use of digital video recording in the preparation stage of pre-service foreign language teachers' micro-teachings. *International Journal on New Trends in Education and Their Implications*, *3*(3), 107-116.

Seidel, T., Blomberg, G. & Renkl, A. (2013). Instructional strategies for using video in teacher education. *Teaching and Teacher Education*, *34*, 56-65.

Seidel, T., Prenzel, M. & Kobarg, M. (2005). *How to run a video study: Technical report of IPN video study?* Münster: Waxman Verlag.

Seidel, T., Stürmer, K., Blomberg, G., Kobarg, M. & Schwindt, K. (2011). Teacher learning from analysis of videotaped classroom situations: Does it make a difference whether teachers observe their own teaching or that of others? *Teaching and Teacher Education*, *27*(2), 259-267.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, *15*(2), 4-14.

Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, *57*(1), 1-23.

Shumin, K. (2002). Factors to consider: Developing adult EFL students' speaking abilities. In J. C. Richards & W. A. Renandya (Eds.) *Methodology in Language Teaching: An anthology of current practice*. (pp. 204-211). New York: Cambridge University Press.

Summak, M. S., Bağlıbel, M. & Samancıoğlu, M. (2010). Technology readiness of primary school teachers: A case study in Turkey. *Procedia-Social and Behavioral Sciences*, *2*(2), 2671-2675.

Stigler, J. W., Gonzales, P., Kwanaka, T., Knoll, S. & Serrano, A. (1999). *The TIMSS videotape classroom study: Methods and findings from an exploratory research project on eighth-grade mathematics instruction in Germany, Japan, and the United States*. A Research and Development Report, Washington, DC: U.S. Government Printing Office.

Şişman, M. (2014). *Eğitim Bilimine Giriş.* Ankara: Pegem Akademi.

Van Olphen, M. (2008). *World language teacher education and educational technology: A look into CK, PCK, and TPACK*. Paper, The annual meeting of the American Educational Research Association, New York.

Voogt, J., Fisser, P., Pareja Roblin, N., Tondeur, J. & van Braak, J. (2013). Technological pedagogical content knowledge - a review of the literature. *Journal of Computer Assisted Learning*, *29*(2), 109-121.

Yeganehpour, P. & Takkac, M. (2016). Using ice-breakers in improving every factor which considered in testing learners speaking ability. *International Journal on New Trends in Education & their Implications (IJONTE)*, *7*(1), 58-68.

Yeh, Y. F., Lin, T. C., Hsu, Y. S., Wu, H. K. & Hwang, F. K. (2014). Science teachers' proficiency levels and patterns of TPACK in a practical context. *Journal of Science Education and Technology*, *24*(1), 78-90.

Yangın Ersanlı, C. (2016). Improving technological pedagogical content knowledge (TPACK) of pre-service English language. *Teachers International Education Studies*, *9*(5), 18.

Yıldırım, A. & Şimşek, H. (2013). *Sosyal bilimlerde nitel araştırma yöntemleri.* Ankara: Seçkin Yayıncılık.

Yin, R. K. (2009). *Case study research: Design and methods*. United States of America: Sage Publications.

Yin, R. K. (2011). *Qualitative research from start to finish.* New York: The Guilford Press.

Zandvliet, D. B. & Fraser, B. J. (2004). Learning environments in information and communications technology classrooms. *Technology, Pedagogy and Education*, *13*(1), 97-123.

Zhu, J. (2003). *Application of computer technology in public school classrooms: Usage dimensions and influencing factors.* (Unpublished doctoral dissertation). Pennsylvania State University, Pennsylvania.

APPENDICES

APPENDIX A: PRE-VIDEO INTERVIEW

Tarih:

Video Çekimi Öncesi Görüşme

Demografik Profil Bilgileri

1.Okul adı:

2.Toplam tecrübe yılı:

3.Branş:

4.Sınıf seviyesi:

Video Çekimi Öncesi Görüşme Soruları

A. Bu kısımda size, video kaydı altına alınacak olan dersiniz ile ilgili birkaç soru sorulacaktır.

1. Video kaydına alınacak dersin konusunu, içeriğini vs. kazanımları ile birlikte ayrıntılı bir şekilde açıklayabilir misiniz?

2. Bugünkü dersin konusu, öğrenciler için yeni bir konu mu, konu tekrarı mı, yoksa ikisi arasında bir yerde mi?

- □ Konu tekrarı
- □ Çoğunlukla konu tekrarı
- □ Yarısı konu tekrarı yarısı yeni bir konu
- □ Çoğunlukla yeni
- □ Yeni konu

3. Bugünkü derste öğrencilere konu ile ilgili öğretmek istediğiniz ana fikir nedir?

4. Peki, bu konuyu öğrenmeleri neden öğrenciler için önemli?

5. Sınıfınızdaki öğrencilerin genel profilinden kısaca bahsedebilir misiniz?

6. Derste kullanacağız teknolojik yazılım, donanım ve materyaller nelerdir? Tanımlayabilir misiniz?

7. Derste kullanacağız başlıca öğretim metotları nelerdir?

8. Bugünkü dersinizde teknolojiyi neden kullanıyorsunuz?

B. Bu kısımda size; ders vereceğiniz sınıftaki öğrenciler ile ilgili birkaç soru sorulacaktır.

9. Sizce İngilizce derslerinde öğrenciler en iyi ne şekilde öğrenmektedirler?

10. Bugünkü ders vereceğiniz sınıftaki öğrenciler en iyi ne şekilde öğrenmektedirler?

11. Bugünkü ders vereceğiniz sınıfınızdaki öğrenciler derslerde teknoloji kullanımını desteklerler mi? Evet ise neden?

12. Sizce bir İngilizce dersinde öğrenciler için bir teknolojiyi diğerinden daha faydalı veya kullanılabilir kılan faktörler nelerdir?

13. Sizce, bir İngilizce dersinde öğrencilerin teknolojiyi derslerinde faydalı olacak şekilde kullanabilmeleri için bilmeleri gereken temel şeyler nelerdir?

14. Lütfen, bir İngilizce dersinde herhangi bir teknolojinin öğrencilerinize fayda sağladığından emin olduğunuz bir tecrübenizi paylaşabilir misiniz?

APPENDIX B: POST-VIDEO INTERVIEW

Tarih:

Video Çekimi Sonrası Görüşme

Ders Öğretim Süreç Bilgileri

**** Bu kısım araştırmacılar tarafından doldurulacaktır.***

1. Videoya çekilen derste anlatılan konu (alt başlıkları ile birlikte) :

2. Sınıf seviyesi:

3. Videoya çekilen derse katılan öğrenci sayısı:

4. Video kaydı yapılan ders saati ve süresi:

5. Videoya çekilen derste kullanılan teknolojik materyaller ve donanımlar:

A. Bu kısımda size kayıt altına alınan dersiniz ile ilgili birkaç soru yönelteceğiz.

1. Derste anlattığınız konuyu tanımlayabilir misiniz? Ders öncesinde anlatmayı planladığınız konunun (alt başlıkları ile birlikte) tümünü kapsayabildiniz mi? Hayır ise sizce sebebi nedir?

B. Bu kısımda normal bir günde verdiğiniz ders ile kayıt altına alınan ders arasındaki farklar ile ilgili birkaç soru yönelteceğiz.

2. Ders anlatım süresince ders anlatım yöntem ve teknikleri;

- □ Her zaman olduğu gibiydi.
- □ Her zaman kullandığım yöntem ve tekniklere oldukça yakındı.
- □ Bir şekilde her zaman kullandığım yöntem ve tekniklerden biraz farklıydı.
- □ Her zaman kullandığım yöntem ve tekniklerden tamamen farklıydı.

Sizce buna ne sebep olmuştur?

3. Video kaydı altına alınan derse katılan öğrenci sayısı ve öğrenci reaksiyonları her zamankinden farklı mıydı? Evet, ise açıklayınız.

4. Sizce kayıt altına alınan dersiniz rutin dersleriniz ile kıyaslandığında olağandan daha iyi, daha kötü veya her zaman olduğu gibi miydi?

 Daha iyiydi

 Her zaman olduğu gibiydi

 Daha kötüydü

5. Peki, bugünkü dersinizde iyi giden kısımlar nelerdi? Bugünkü dersinizde iyi gitmeyen kısımlar nelerdi? Eğer bugün verdiğiniz dersi bir kez daha verme şansınız olsaydı (öğretim yöntem ve teknikleri, ders materyalleri vs.) ne gibi değişiklikler yapardınız?

C. Bu kısımda size bugünkü dersinizde teknoloji kullanımınıza yönelik sorular yönelteceğiz.

6. Bugünkü verdiğiniz dersi daha önce teknoloji kullanmadan verdiniz mi? Evet ise bu derste sizi teknoloji kullanmaya teşvik eden sebepler nelerdir, açıklayabilir misiniz?

7. Bugünkü dersinizde teknoloji kullanımınız konusunda derse gelmeden önce herhangi bir ön hazırlık yaptınız mı? İzlediğiniz belirli bir yöntem ve teknik var mı?

8. Bugünkü verdiğiniz dersi düşündüğünüzde, İngilizce öğreniminde, teknolojinin öğrencilerin öğrenme sürecine etkisini gözlemleyebildiğimiz somut bir örnek var mı? Evet, ise nedir?

9. Bugünkü dersinizde İngilizce eğitiminde kullandığınız öğretim metot ve stratejilerini teknoloji ile nasıl birleştirdiniz?

10. Bugünkü dersinizde sınıfınızda teknolojiyi kullanırken herhangi bir zorlukla karşılaştınız mı? Karşılaştığınız zorluklarla nasıl başa çıktınız?

D. Bu kısımda size, derste teknoloji kullanımına bakış açınız ile ilgili genel sorular yönelteceğiz.

A. Motivasyon/Giriş Becerileri

1. İngilizce derslerinde teknolojiyi kullanma becerinizi nasıl geliştirdiniz? Bu konuda hangi kaynaklardan yararlanıyorsunuz?

2. İngilizce dersinde içerik olarak yeterli bilgiye ve bunları geliştirecek yöntemlere sahip olduğunuzu düşünüyor musunuz?

B. Derse Hazırlık

3. İngilizce öğretimi için derste kullanacağınız teknolojileri neye göre belirliyorsunuz?

4. İngilizce ders planınızı ve etkinliklerinizi hazırlarken teknolojik unsurları göz önünde bulundurarak mı hazırlarsınız? Evet, ise açıklayabilir misiniz?

C. Teknoloji Entegrasyonu

5. İngilizce derslerinize teknolojiyi entegre etme sürecinde izlediğiniz herhangi bir yöntem, metot veya prosedür var mı? Varsa, süreci açıklayabilir misiniz?

6. Bu yöntem ve tekniklerin İngilizce öğretiminde teknoloji kullanımına etkisi var mı? Varsa neler?

7. İngilizce dersinde hangi konu, kavram ve becerileri teknoloji kullanarak daha rahat anlatabileceğinizi düşünüyorsunuz?

8. İngilizce öğretimi için özel olarak kullandığınız teknoloji veya program var mı varsa nelerdir? Sizce hangi teknolojiler İngilizce öğretimini kolaylaştırmaktadır? Nasıl ve ne şekilde?

9. Teknoloji kullanımıyla öğrencilerin İngilizce öğrenimine olan ilgi ve motivasyonunu artırabiliyor musunuz? Evet, ise nasıl?

D. Teknolojik Sorunlarla Başetme

10. Dersinizde kullandığınız teknolojiler olması gerektiği ya da planladığınız gibi çalışıyor mu? Eğer çalışmıyorsa, olası problemler ile kendiniz nasıl başa çıkıyorsunuz? Örnek verebilir misiniz?

11. İngilizce derslerinde kullandığınız teknoloji 4 temel beceriyi (dinleme, konuşma, okuma ve yazma) geliştirmede hangi sorunlar, nasıl ortaya çıkmakta? Bu sorunlarla nasıl baş etmektesiniz?

E. Sınıf Yönetimi

12. Teknoloji kullanımı sınıf yönetimi problemlerine zemin hazırlıyor mu? Evet, ise, bu problemlerin nasıl üstesinden geliyorsunuz? Çözümler nelerdir?

13. Ders verdiğiniz sınıfınızdaki öğrenci profili (yaş ve seviye), ders sırasında kullandığınız teknoloji seçiminize etki ediyor mu?

F. Dil Becerileri

14. İngilizce öğretiminde konuşma, yazma, dinleme ve okuma becerilerini hangi teknolojileri teknoloji kullanarak ve nasıl geliştiriyorsunuz?

15. İngilizce dersinde kullandığınız teknolojiyi yeterli bir şekilde derse ve becerilere bütünleştirebildiğinizi düşünüyor musunuz?

G. Değerlendirme

16. İngilizce öğretiminde teknolojiyi kullanarak öğrencileri değerlendirebiliyor musunuz? Bu süreçten kısaca bahsedebilir misiniz?

17. Teknoloji kullanarak öğrencilerinizi ve konuşma, yazma, dinleme ve okuma becerilerini nasıl değerlendiriyorsunuz?

APPENDIX C: VIDEO RECORDING INFORMATION FORM

	Your information:
Date of the study:	
The video recording can take place during the following periods…	Period: Begin: Room no:
The video equipment can be set up ahead of time in English language classroom	Yes ☐ Not possible ☐
The video equipment can remain in the classroom between recording sessions(if required)	Yes ☐ Not possible ☐
Period for teacher pre interview	Period: Begin: Room no:
Period for teacher post interview	Period: Begin: Room no:

APPENDIX D: APPROVAL OF THE ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

DUMLUPINAR BULVARI 06800
ÇANKAYA ANKARA/TURKEY
T: +90 312 210 22 91
F: +90 312 210 79 59
ueam@metu.edu.tr
www.ueam.metu.edu.tr

Sayı: 28620816/102-202 27 Şubat 2015

Gönderilen: Y. Doç. Dr. Evrim Baran
Eğitim Programları ve Öğretim

Gönderen : Prof. Dr. Canan Sümer
IAK Başkan Vekili

İlgi : Etik Onayı

"Teknoloji Sınıflarında Öğretmen Bilgisi Göstergelerini Video Çalışması Yöntemi ile İnceleme ve Araştırma Çalışması" isimli araştırmanız "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

27/02/2015

Prof.Dr. Canan Sümer
Uygulamalı Etik Araştırma Merkezi
(UEAM) Başkan Vekili
ODTÜ 06531 ANKARA

APPENDIX E: THE CONSENT LETTER OF THE MINISTRY OF NATIONAL EDUCATION

T.C.
MİLLÎ EĞİTİM BAKANLIĞI
Yenilik ve Eğitim Teknolojileri Genel Müdürlüğü

ÖĞRENCİ İŞLERİ DAİRE BAŞKANLIĞI
Ev. Arş. Md. Saat :

Sayı : 81576613/605/3674351 06/04/2015
Konu: Araştırma izni.

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
(Öğrenci İşleri Daire Başkanlığına)

İlgi: a) 27-03-2015 tarih ve 54850036-300-1326 sayılı yazınız
b) 07/03/2012 tarih ve B.08.0.YET.00.20.00.0/3616 sayılı genelge

İlgi (a) yazı ile Eğitim Fakültesi Eğitim Bilimleri Bölümü öğretim üyesi Yard. Doç. Dr. Evrim BARAN'ın "Teknoloji Sınıflarında Öğretmen Bilgisi Göstergelerini Video Çalışması Yöntemiyle İnceleme ve Araştırma Çalışması" konulu araştırması kapsamında hazırlamış olduğunuz veri toplama araçlarının İstanbul ve Ankara'da bulunan Milli Eğitim Bakanlığına bağlı resmi ve özel ilköğretim ve ortaöğretim kurumlarında görev yapan öğretmenlere uygulanmasına yönelik izin talebi Genel Müdürlüğümüzce incelenmiştir.

Onaylı bir örneği Bakanlığımızda muhafaza edilen ve uygulama esnasında da imzalı ve mühürlü örnekten çoğaltılan veri toplama araçlarının gönüllülük esas olmak üzere; kamera çekiminde yer alan öğrenci velilerinin muvafakatı alınmak ve eğitim öğretim faaliyetlerini aksatmamak kaydıyla 2014-2015 eğitim öğretim yılında İstanbul ve Ankara'da bulunan Milli Eğitim Bakanlığına bağlı resmi ve özel ilköğretim ve ortaöğretim kurumlarında göre yapan öğretmenlere uygulanmasına ilgi (b) genelge esasları doğrultusunda izin verilmiştir.

Gereğini bilgilerinize rica ederim.

Mustafa Hakan BÜCÜK
Bakan a.
Daire Başkanı

Ek:Veri toplama araçları (dört sayfa)

Güvenli Elektronik İmzalı
Aslı ile Aynıdır
07/04/2015

Yetkinin aslını elden aldım.
13.04.2015 CEREN ÇINAR

09-04-2015-6128

Konya Yolu No:21 /ANKARA
Elektronik Ağ: www.meb.gov.tr
atillademirbas@meb.gov.tr

Ayrıntılı bilgi için: Atilla DEMİRBAŞ
Seyda KARABULUT
Telefon:0-312-2969400/9582

APPENDIX F: VOLUNTARY PARTICIPATION FORM

Gönüllü Katılım (Bilgilendirilmiş Onay) Formu

Araştırmacı: Arş.Gör.Melek Dönmez

Araştırmacının kurumu: ODTÜ Eğitim Fakültesi Eğitim Bilimleri Bölümü

Araştırmanın amacı: İngilizce sınıflarında Öğretmenlerin TPAB göstergelerinin belirlenmesi

İletişim: dmelek@metu.edu.tr

Teknoloji Sınıflarında İngilizce Öğretmenlerinin TPAB Göstergelerini Video Çalışması Yöntemi ile İnceleme ve Araştırma Çalışması, ODTÜ Eğitim Bilimleri Fakültesi, Eğitim Programları ve Öğretim Programı yüksek lisans öğrencisi Ar. Gör. Melek Dönmez tarafından, Eğitim Bilimleri öğretim üyesi Yrd. Doç. Dr. Evrim Baran danışmanlığında yürütülmesi planlanan bir araştırma çalışmasıdır. Sözü geçen çalışma, ilköğretim ve liselerde (2-12. sınıf), teknolojik unsurları etkin bir şekilde kullanabilen öğretmenlerin sınıflarında birer saat video çekimi gerçekleştirilmesini içermektedir. Video çekimleri öncesi öğretmenlerle ön görüşmeler yapılacaktır. Video çekimleri sonrası öğretmenlerle video kayıt altına alınan derslerle ilgili video sonrası görüşmeler yapılacaktır. Araştırma kapsamında toplanan veriler TPAB göstergelerinin belirlenmesinde kullanılacaktır. Bu çalışmaya katılımınız, ileride meslektaşlarınıza sınıflarında teknolojiyi etkin bir şekilde kullanmaları konusunda rehberlik edecek ve literatürde tespit edilmiş önemli eksikleri gidermek amacı ile araştırmacıya yardımcı olacaktır. Çalışmaya katılım tamamıyla gönüllülük temelindedir. Görüşmeler ve ders video kayıtları kesinlikle gizli tutulacak ve sadece çalışmaya yürüten araştırmacılar tarafından değerlendirilecektir. Çalışma sonucunda elde edilen verilerin analizinden çıkarılacak sonuçlar ve toplanan veriler ile ilgili her türlü bilgi sadece bilimsel

yayınlarda kullanılacaktır. Kişisel ve mesleki bilgileriniz ise kesinlikle gizli tutulacaktır.Bu bilgilere araştırmacılar ve danışmanı dışında kimsenin erişimi söz konusu değildir.

Veri toplama araçları, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında görüşme sorularından ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta serbestsiniz. Böyle bir durumda, araştırmacıya, tamamlamadığınızı söylemek yeterli olacaktır. Çalışma sonunda ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz.

Arş. Gör Melek Dönmez
Orta Doğu Teknik Üniversitesi
Eğitim Bilimleri Bölümü
Tel: 0(312) 210 40 42
E-posta: dmelek@metu.edu.tr

Yrd.Doç.Dr. Evrim Baran
Orta Doğu Teknik Üniversitesi
Eğitim Bilimleri Bölümü
Tel: 0(312) 210 40 17
E-posta: ebaran@metu.edu.tr

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. *(Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).*

İsim Soyisim **Tarih** **İmza**

----/----/-----

APPENDIX G: PARENT CONSENT FORM

Veli Onay Mektubu

Sayın Veli,

Teknoloji Sınıflarında Öğretmen Bilgisi Göstergelerini Video Çalışması Yöntemi ile İnceleme ve Araştırma Çalışması, ODTÜ Eğitim Bilimleri Fakültesi, Eğitim Programları ve Öğretim Programı yüksek lisans Melek Dönmez tarafından, Eğitim Bilimleri Yrd. Doç. Dr. Evrim Baran danışmanlığında yürütülmesi planlanan araştırma çalışmasıdır. Sözü geçen çalışma,ilköğretim ve liselerde, teknolojik unsurları etkin bir şekilde kullanabilen öğretmenlerin derslerinde ders saati süresince (yada bir tam konuya ayrılan ders saati süresince) video kaydı yapılmasını amaçlamaktadır. Derslerden alınan video kayıtları, bir öğretmen bilgi türü olan TPAB (Teknolojik Pedagojik Alan Bilgisi) bileşenlerinin sınıfta ki uygulamalarının tespiti amacıyla yapılmaktadır.Bu video kayıtlarının analizinden toplanılan bilgi daha sonra öğretmenlerin teknolojiyi varolan içerik ve pedagoji bilgisi ile etkin bir şekilde harmanlayarak, teknolojik unsurları sınıflarında optimum verimlilik ile kullanmalarında öğretmenlere yol göstermek amacı ile kullanılacaktır. Bu mektubun yollanış amacı tez çalışması süresince ve daha sonrasında hiçbir öğrencinin şahsi ve kimliksel bilgilerinin paylaşılmayacağına ve süreçte öğrencilere herhangi fiziksel, psikolojik ve ekonomik zarar gelmeyeceğine dair güvence vermektir. Bu çalışmaya katılım gönüllülük esasına dayanmaktadır. Öğretmenin yanısıra öğrencinin de gönüllülüğü ve onayı esastır.

Çalışmaya ya da çocuğunuzun katılımına yönelik daha fazla bilgi için başvurulacak kişi/kişilerin adresi, telefon numarası ve e-posta adresleri aşağıda olduğu gibidir.

Arş.Gör. Melek Dönmez
ODTÜ Eğitim Fakültesi Eğitim Bilimleri Bölümü
Tel: 0 (312) 210 40 42
E-posta: dmelek@metu.edu.tr

Yrd. Doç.Dr. Evrim Baran
ODTÜ Eğitim Fakültesi Eğitim Bilimleri Bölümü
Tel : 0 (312) 210 4017
E-posta : ebaran@metu.edu.tr

Yukarıda açıklamasını okuduğum çalışmaya,

oğlum/kızım _____'nin katılımına izin veriyorum.

Velinin:

Adı-Soyadı: _____ İmzası: _____ Tarih: _____

Çocuğunuzun katılımı ya da haklarının korunmasına yönelik sorularınız varsa ya da çocuğunuz herhangi bir şekilde risk altında olabileceğine, strese maruz kalacağına inanıyorsanız Orta Doğu Teknik Üniversitesi Etik Kuruluna (312) 210-7348 telefon numarasından ulaşabilirsiniz.

APPENDIX H: TURKISH SUMMARY

TÜRKÇE ÖZET

TÜRKİYE'DEKİ TEKNOLOJİ DESTEKLİ DİL ÖĞRETİMİ SINIFLARINDA GÖZLENEBİLİR TPAB GÖSTERGELERİ ÜZERİNE VİDEO DURUM ÇALIŞMASI

GİRİŞ

Günden güne ikinci bir dil öğrenmek önem kazanmaktadır, bu bağlamda Milli Eğitim bakanlığı (MEB) 2. ve 12. sınıflarda İngilizce öğretimine başlamıştır. İngiliz dili eğitimi hem öğrenciler hem de öğretmenler için çok geniş bir alanı kapsamaktadır. İngiliz dili öğretimi sınıfların öğretmenler ve öğrenciler dilin akıcı gelişimini sağlamak için büyük çaba sarf etmektedirler. Dil öğretim sınıflarının öğrenme ortamları dil becerilerinin geliştirilmesi için önemlidir.

Teknolojik ve eğitimsel gelişmelere dayanarak, sınıflara teknoloji entegrasyonu yetkili otoriteler tarafından öğretmenlerin kişisel sorunu yerine genel bir eğitim politikası olarak görülmeli ve uygulanmalıdır (Tondeur, Keer, Braak & Valche, 2008). Öğretmenler yeni çıkan teknolojileri kullanarak sınıflarında dil öğretimini teknoloji desteğiyle geliştirmelidirler (Golonka, Bowles, Frank, Richardson & Freynik, 2014). Bu gelişmeler ışığında, teknoloji entegrasyonu Türkiye'de yeni ve güncellenmiş teknolojiler sınıf ortamlarına FATIH projesiyle (Fırsatları Artırma ve Teknolojiyi İyileştirme Hareketi) öğrenci ve öğretmenlerin teknoloji kullanımını artırmak için entegre edilmeye başlanmıştır (MEB, 2012).

Sınıflarda internet ve bilgisayarlar gibi güncel ve yeni teknolojilerin kullanımı öğrenme ve öğretme ortamlarının geliştirilmesini sağlamaktadır (Summak, Bağlıbel & Samancıoğlu). Günümüzde artık teknolojinin öğrenme ortamlarında kullanılıp kullanılmayacağından çok hangi teknolojilerin ne şekilde ve etkili olarak kullanılacağı tartışmaları önem kazanmaktadır (Angeli & Valanides, 2009). Teknolojinin öğrenme ortamlarında etkin kullanılmaya başlamasının ardından, Mishra ve Kohler (2006) 'teknolojik, pedagojik, alan bilgisi' (TPAB) kavramıyla yeni bir teori çerçevesi ortaya atmışlardır. Fryling (2013) TPAB kavramını, öğretmen bilgisini, alan bilgisini ve pedagoji bilgisinin teknoloji kullanımı ile birleştirilmesi ve bu kavramların pedagojik alan bilgisi (PAB), teknolojik alan bilgisi (TAB) ve teknolojik pedagojik bilgisi (TPB) şeklinde bir araya getirilmesi olarak özetlemiştir. Kısacası TPAB kavramı teknoloji, pedagoji ve alan bilgilerinin birleşimi olarak ifade edilmiştir. Bu kavramın tanımlanması, öğretmenlerin teknolojiyi entegre etme sürecinin açıklanmasına yardımcı olmuştur.

Dünya genelinde yapılan araştırmalar göstermiştir ki TPAB kavramı karmaşık ve çok yönlü bir yapıdadır (Koehler, Mishra & Yahya, 2007; Guzey & Roehring, 2009; Rienties, Brouwer & Lygo-Baker, 2013). Graham (2011) TPAB kavramının açıklanmasında karmaşık yapıdan ve belirsiz tanımlardan kaynaklanan eksiklikler olduğunu vurgulamıştır. Benzer bir şekilde Cox (2008) TPAB kavramı bileşenlerinin ayrı ayrı tanımlanmasının ve açıklanmasının kavramın bütününü açıklayıcı bir rolü olmadığını, aksine TPAB bileşenlerinin bir bütün olarak ele alınmasının gerektiğini dile getirmiştir. Bu açıklamalar ve tanımlar göz önünde bulundurulduğunda TPAB kavramının güncel teknolojiler ve sınıf ortamlarında kullanımının değişken olması; öğrenci ve öğretmen etkileşimini de içermesi sebepleriyle dönüşümsel ve bağlamsal bir yaklaşım şekliyle ele alınması gerekir.

TPAB çalışmaları genel olarak öğretmenlerin ve öğretmen adaylarının ifadelerine dayanmaktadır. TPAB göstergeleri de genel olarak literatürde anket ve görüşmeler yardımıyla ikinci bir kaynaktan aktarılmaktadır. Bu yüzde TPAB

göstergelerinin birincil elden izlenmesi için video çalışmalarına ihtiyaç duyulmuştur. Video çalışmaları TPAB göstergelerin aktarılmasından ziyade objektif olarak gözlenmesine olanak sağlamaktadır. Video çalışmaları sınıf ortamlarında sıklıkla kullanılmalarına rağmen genellikle eğitici ve öğretici bir role üstlenmişlerdir (Brückmann et al., 2007). TIMMS (Third International Mathematics and Science Study) video çalışmaları çeşitli ülkelerde ki öğrenme öğretme ortamlarını karşılaştırmak için video çalışmalarını kullanmaya başlamışlardır (Stigler, Gonzales, Kwanaka, Knoll & Serrano, 1999). Dil öğrenme ortamlarında da videolar öğretmenler tarafından eğitim aracı olarak veya öğretmen değerlendirme aracı olarak oldukça sık kullanılmaktadırlar. Ancak TPAB göstergelerinin belirlenmesinde videolar nispeten yeni ve kullanımı kolay veri toplama araçlarıdır (Savaş, 2012). Bu bağlamda, TPAB kavramının göstergelerinin belirlenmesi daha detaylı bir sonuç elde etmek için toplanan verilerin farklı veri toplama araçları ile çeşitlendirilmesi araştırmacılar tarafından önerilmektedir (Doering, Veletsianos, Scharber & Miller, 2009). Bu bilgilere dayanarak, video kayıtlarının bu çalışmada öğretmen görüşmeleriyle birlikte uygulanacaktır.

İngiliz dili öğretim sınıflarına teknolojinin entegre edilmesi ve bir çok dijital materyallerin dil öğretimi sınıflarında kullanılması tartışmalı bir durumdur (Liu, Liu, Yu, Li & Wen, 2014). TPAB kavramının tanımlanmasından sonra, bu kavram dil öğretim ortamlarında da sıkça kullanılan bir yapı olmaya başlamıştır. Liu et al. (2014) ayrıca TPAB kavramının dil öğretim ortamlarında ki kullanımının dil becerilerine ve çok geniş bir alana sahip olması sebebiyle daha farklı ele almak gerektiğini belirtmişlerdir. Chien (2015) yabancı dil öğretmenlerinin teknoloji entegre etme sürecinde aktif bir role sahip olduklarını ve TPAB kavramını ders planı hazırlanmasında ders anlatım sürecinde ve değerlendirme aşamasında kullanımının önemli olduğunu vurgulamıştır. Aynı şekilde Gilakani (2012) teknolojinin sınıf ortamlarında kullanırken yabancı dil öğretmenlerinin öğrencilerinin ihtiyaçlarını karşılama, sınıf yönetimi problemleriyle baş etme ve uygun teknolojiyi kullanma konularını göz önünde bulundurmaları gerekmektedir.

Tai ve Chauanch (2012) teknoloji kullanımında yabancı dil öğretmenleri ayrıca öğrenme yaklaşımlarının düzenlenmesi, otantik öğrenme ortamlarının hazırlanması ve TPAB yeterliliklerini geliştirmek için öğretim programlarına katılmaları gibi bazı öneriler sunmuşturlar. Bunun için İngiliz dili öğretmenlerinin TPAB göstergeleri belirlenirken dil öğrenme ortamları ve teknolojinin entegre edilme süreci öğretmenler için hayati önem arz etmektedir.

Çalışmanın Amacı

Bu çalışmanın amacı İngiliz dili öğretmenlerinin derslerine teknoloji entegre etme sebeplerini ve İngiliz dili öğretimi sınıflarında ki gözlenebilir TPAB göstergelerinin belirlenmesidir. Bu amaç doğrultusunda aşağıda verilen araştırma sorularına cevap aranmıştır.

1. İngiliz dili öğretmenlerinin İngiliz dili öğretimi sınıflarına teknoloji entegre etmelerinin sebepleri nelerdir?
2. İngiliz dili öğretmenlerinin teknoloji destekli dil öğrenme ortamlarının ders tasarlama sürecinde ki TPAB göstergeleri nelerdir?
3. İngiliz dili öğretmenlerinin teknoloji destekli dil öğrenme ortamlarının aktif ders öğretiminde ki TPAB göstergeleri nelerdir?

Çalışmanın Önemi

Teknoloji entegrasyonu İngiliz dili öğretim ortamları içinde hayati bir önem taşımaktadır. Golonka et al. (2014) dil öğretiminin gelişimini ve etkileşimini artırmak için dil öğretim ortamlarının teknolojik materyaller ve gereçlerle desteklenmesi gerektiğini belirtmişlerdir. Dil öğretim sınıflarında teknoloji kullanımının önemi onlarca yıldır tartışılmaktadır. Türkiye'de FATIH projesinin başlatılmasıyla sınıf ortamları yeni ve güncel teknolojilerle donatılmış ve öğrenci ve öğretmenlerin aktif teknoloji kullanımı desteklenmeye başlamıştır (MEB, 2012). Bu projenin parçası olarak her öğrenciye tablet dağıtımı ve sınıfların akıllı tahta ve internet ile donatılmaya başlamıştır. Aynı şekilde, özel okullarda öğrencilerinin ve öğretmenlerinin yenilikleri ve teknolojik gelişmeleri yakalamaları için kendi

öğretim ortamlarını teknoloji destekli sınıflara çevirmeye başlamışlardır. Okullar teknolojik alt yapı ile desteklenme çalışırken aslında önemli olan konu bu teknolojik imkanların nasıl ve ne şekilde öğrenme ortamlarına etkili bir şekilde entegre edilmeye çalışmasıdır. Bu süreçte de öğretmenler teknolojinin etkili bir şekilde kullanımında ve TPAB göstergelerinin teknoloji destekli sınıflarda etkili bir şekilde sergilenmesinde çok önemli bir role sahiptirler.

Birçok nitel ve nicel çalışmalarda öğretmenlerin TPAB göstergelerinin belirlenmesi ve teknoloji entegre etme sürecinin açıklanması için çok çeşitli yöntemler farklı öğrenme ortamlarında uygulanmıştır (Cox, 2008). Ancak, bu araştırmalar TPAB göstergelerinin belirlenmesinde genel olarak anket ve görüşmeler kullanmışlar ve bu göstergeleri TPAB bileşenlerini ayırarak açıklamaya çalışmışlardır. Baxter and Lederman (1999) öğretmenlerin pedagojik alan bilgilerinin ortaya çıkarılmasında çoğunlukla anketler, kavram haritaları, ders planı analizleri, durum senaryoları, görüşmeler ve video performanslarından yararlanılmaktadır. Aynı şekilde TPAB çalışmaları da öğretmenleri analiz etmek için genellikle anketler, gözlemler ve görüşmeleri kullanılmıştır (Jen, Yeh, Hsu, Wu & Chen, 2016). Fakat aktif ders ortamında yapılan TPAB çalışmaları sınırlı sayıdadırlar (Yeh, Lin, Hsu, Wu & Hwang, 2014). Bu sebeplerden dolayı bu çalışma video kayıtlarını kullanarak öğretmenlerin TPAB göstergelerini sınıf ortamlarında gözlemleyerek açıklamaya çalışan özgün bir çalışmadır.

Videolar dil öğretimi sınıf ortamlarında çoğunlukla bir öğretim aracı olarak kullanılmaktadır. Ancak çok az çalışma TPAB göstergelerinin belirlenmesi için sınırlı sayıda çalışma vardır. Diğer önemli bir konu ise video çalışmaları TPAB ve İngiliz dil öğretimi sınıflarında göstergelerin belirlenmesi, video çalışmalarının nasıl kullanıldığı ve bu göstergelerin nasıl etkili bir yolla belirlenebileceğidir. Savaş (2012) video çalışmalarının öğretmen eğitiminde ki deneyimlerin ve fikirlerinin ayrıntılı bir şekilde değerlendirilmesi için etkili bir yöntem olarak dile getirilmiştir. Bu önemli konularda ve video çalışmalarının alan yazında eksik

olmasından dolayı bu çalışma İngiliz dili öğretmenlerinin gözlenebilir TPAB göstergelerinin belirlenmesi için nitel bir araştırma olarak uygulanmıştır.

ARAŞTIRMANIN YÖNTEMİ

Araştırma Deseni

Bu çalışma İngiliz dili öğretimi sınıflarında ki öğretmenlerinin gözlenebilir TPAB göstergelerinin belirlenmesini sağlamaya çalışan nitel bir çalışmadır. Araştırmanın deseni durum çalışması olarak tanımlanmıştır. Creswell (2007) durum çalışmalarını 'gerçek ortamlardaki nitel araştırmalar, gözlem, görüşme, işitsel materyaller, dökümanlar ve raporların incelenmesi gibi birçok veri toplama araçlarını kullanarak detaylı ve derinlemesine bilgi toplanmasını sağlayan çalışmalar' (p. 73) olarak adlandırmıştır. Durum çalışması deseni bu araştırma da İngiliz dili öğretim sınıflarında öğretmenlerin TPAB göstergelerinin belirlenmesi, detaylı ve derinlemesine bilgi edinmek ve güvenilir çalışma yapmak için kullanılmıştır. Ayrıca çalışma video çalışma yöntemiyle video kayıtlarını kullanarak desteklemiş ve gerçek sınıf ortamlarından veri toplanmıştır. Knoblauch, Baer, Laurier, Petschke ve Schnettler (2008) görsel ve video çalışmaları sosyal bilimler alanında tarafsız, açık ve derinlemesine bilgi toplamak için son dönemlerde tartışma konusu olmaya başlamıştır. Çünkü video verileri ve bu verilerin analizleriyle birlikte İngiliz dili öğretmenlerinin TPAB göstergelerinin gerçek dil öğrenme ortamlarında kullanılması ve öğretmenlerin aktif hareketlerinin gözlenmesi ve ortaya çıkarılması sağlanmıştır.

Okulun ortamı

Bu çalışma teknoloji destekli öğretimi benimseyen ve İngiliz dili öğretimine önem veren İstanbul'da bir özel okulda yapılmıştır. Okul yönetimi 'akıllı okul' konseptini benimsemiştir ve bütün sınıfları akıllı tahtalar, internet ve bütün öğrencilere tablet ile eğitim olanakları sağlanmıştır. Okulun ana hedefi teknoloji destekli öğrenme ortamını oluşturmak ve dil öğretimini desteklemektir. Okulun

bütün sınıfları teknolojik imkânlarla donatılmış ve İngiliz dili öğretimine okul öncesinde üniversite eğitimine kadar devam edilmektedir. Bütün öğrenciler kendi tabletlerini öğrenme ortamına getirmekte ve etkileşimli tahtalarla öğretmenler öğretim sürecini yönetmektedirler.

Okulun benimsediği önemli politikalardan biri de yabancı dil eğitiminin hayati önem taşımasıdır. Hem Türk olan hem de ana dili İngilizce olan İngiliz dili öğretmenleri yabancı dil eğitimini yürütmektedirler. Teknolojiyle zenginleştirilmiş yabancı dil sınıfları okulun benimsediği önemli bir politikadır. Okulun desteklediği YLP ve STOYS gibi farklı dil öğrenme programları kullanılmaktadır. Okulun yabancı dil eğitimi hedefi ise sadece İngiliz dili eğitimini vermek değil aynı zamanda teknoloji destekli öğrenme ortamlarını kullanarak otantik öğrenme ortamları yaratmaktır.

Araştırmanın Katılımcıları

Araştırmanın katılımcılarını beş İngiliz dili öğretmeni oluşturmaktadır. Katılımcıların tümü İstanbul'da bir özel okulun ilk, orta ve lise kademelerinde İngiliz dili öğretmeni olarak görev yapmaktadırlar. Çalışmanın katılımcıları amaca yönelik örneklem yöntemi kullanılarak seçilmiştir. Amaca yönelik örneklem durum çalışmalarında belirli durumlar için etkili ve derinlemesine bir veri toplama için kullanılmaktadır (Yin, 2009). Öğretmenlerin çalışmaya katılımları gönüllülük esasına dayanarak sağlanmıştır. Okulda ki bir erkek ve dört kadın İngiliz dili öğretmeninden beş farklı sınıf ortamında beş ders video kaydı yapılmıştır. Her video bir ders saatini kapsamaktadır. Bu öğretmenler ilkokul, ortaokul ve lise düzeyinde olmak üzere 4., 5., 7. ve 9. seviyesindedirler. Bu öğretmenlerin iş deneyimleri 2 ila 18 yıl içerisinde değişmektedir.

Veri Toplama Araçları

Bu çalışmanın veri toplama araçları video öncesi görüşmeleri, video kayıtları ve video sonrası görüşmeleri olmak üzere üç farklı veri toplama aracı kullanılmıştır. Video öncesi ve video sonrası görüşmeler yarı yapılandırılmış bir

şekilde araştırmacı tarafından uygulanmıştır ve dersler araştırmacı tarafından kayıt altına alınmıştır. Araştırmanın ilk aşamasını video öncesi görüşmeler oluşturmaktadır. Video öncesi görüşme formu katılımcılardan öğretmenlerin ve öğrencilerin demografik bilgilerinin alınması ve video kayıt altına alınacak olan dersin hakkında bilgi sahibi olunması için hazırlanmıştır. Video öncesi görüşme toplamda 14 soru içermektedir. Video öncesi görüşmeler 5.21 ile 10.28 süreleri arasında değişmektedir. Video toplama araçları ise bir kamera ve kamerayı ayakta tutmak için bir tripoddan oluşmaktadır. Araştırmacı video ön görüşmeyi yaptıktan sonra her öğretmenin bir ders saatini video kayıt altına almıştır. Kayıt altına alınan videolar 26.48 ile 35.12 süreleri aralarında sürmüştür. Son olarak veriler derslerin kayıt altına alınmasında sonra katılımcılara video sonrası görüşmeler uygulanmıştır. Video sonrası görüşmeler toplamda 32 soru içermektedir ve 15.11 ile 22.39 dakika arasında sürmüştür.

Veri Analizi

Video öncesi görüşme, video kayıtları ve video sonrası görüşmelerden elde edilen veriler yardımıyla nitel veriler toplanmıştır. Yarı yapılandırılmış görüşmeler ve videolar araştırmacı tarafından kayıt altına alınmıştır. Creswell (2007) veri analizinin veri toplama sürecinde ayrı bir durum olmadığını ve verilerin toplanma aşamasında değerlendirme planlarının yapılması gerektiğini belirtmiştir. Aynı şekil de Patton (2002) da veri analiz sürecinin veri toplama sürecinden ayrılmış bir bölüm olmadığını vurgulamıştır. Çalışmanın verileri görüşmeler ve videolar yoluyla toplandıktan sonra kayıt altındaki veriler yazıya geçirilmiştir. Transkript edilmiş video ve görüşme verileri MAXQDA Nitel Veri Analiz Programı12.0 kullanılarak analiz edilmiştir. Bu analizde önce kodlar oluşturulmuş daha sonra bu kodlardan yola çıkılarak ders tasarımım temaları oluşturulmuştur. İlk olarak beş durum için betimsel veri analizi yapılmış ve öğretmenler, öğrenciler ve sınıf ortamları tanımlanmaya çalışılmıştır. Bütün öğrenme ortamlarının tanımlanmasından sonra bütün durumlar bir bağlamsal çerçevede değerlendirilerek çalışmanın sonuçları ortaya koyulmuştur.

Araştırmanın Geçerliliği ve Güvenilirliği

Araştırmanın geçerlilik ve güvenirliğini sağlamak için bir kaç yola başvurulmuştur. Nitel çalışmalarda geçerlilik ve güvenilirlik çeşitli yöntemlerle sağlanabilmektedir. İlk olarak güvenilirliği sağlamak için araştırmacı veri toplama sürecinde ve verilerin analiz edilme aşamasında araştırmacı yanlılığından kaçınmıştır. İkinci olarak geçerliliği sağlamak içinde çalışmayı uygulaman önce pilot çalışma yapmıştır. Pilot çalışma için örnek bir okul bulunmuş ve video öncesi görüşme soruları, videoların toplanma süreci ve video sonrası görüşme soruları pilot çalışmaya dayanarak yeniden düzenlenmiştir. Bunun yanında hem yarı yapılandırılmış görüşmeler kullanılarak hem de dersler video kayıt altına alınarak verilerin çeşitlendirilmesi sağlanmıştır. Ayrıca veriler araştırmacı tarafından toplanmadan önce, toplanma ve analiz aşamalarında benzer bir konu üstünde çalışan akranlarından çalışmanın işleyişi konusunda bilgi alışverişi yapılmış ve objektiflik sağlanmaya çalışılmıştır. Son olarak geçerlilik ve güvenilirliğin sağlanması açısından, araştırmacı bütün katılımcılara araştırmanın amacını, araştırma sürecinin işleyişini ve araştırmanın uygulanması hakkındaki bilgileri bütün katılımcılara açıklamıştır. Bunun sonunda bütün katılımcıların onayını alarak çalışmaya gönüllü katılmalarını sağlamıştır.

Araştırmanın Sınırlılıkları

İngiliz dili öğretmenlerinin gözlenebilir TPAB göstergelerini belirlemeyi amaçlayan bu çalışman bazı sınırlılıkları vardır. Bunlardan biri araştırma özel bir okulda ve teknolojik destekli sınıflarda yapıldığı için rastlantısal örneklem yerine örneklem olarak amaca yönelik örneklem kullanılmıştır. Bunun yanında çalışma bir video durum çalışması olarak desenlenmiştir. Her bir öğretmenin bir ders saati video kayıt altına alınarak gözlenebilir TPAB göstergeleri ortaya çıkarılmaya çalışılmıştır. Ancak ders sırasında sınıf ortamı video kayıt altına alındığı için hem öğretmenler hem de öğrencilerin kamera etkisi altında kalmış olabilirler. Örneğin,

öğrenciler ve öğretmenler normal ders işleyişinin dışında teknolojiyi ders ortamında daha etkin olarak kullanmış olabilirler. Araştırmacı video kayıt altına alına derslerde ki bu tarz yanlılıkları önleyemeyebilir. Son olarak veri toplama aracı olarak yarı yapılandırılmış görüşmeler kullanıldığı için, araştırmacı yine öğretmenlerin verdiği cevapların yanlılığını veya doğruluğunu önleyemez. Aynı şekilde araştırmanın deseninden dolayı ve teknoloji ile zenginleştirilmiş özel bir okulda ve sınıflarda yapıldığından dolayı; katılımcı sayısı ve amaca yönelik örneklem sebebiyle araştırmanın sonuçlarının bütün teknoloji destekli dil öğretim sınıflarına genellemek olası değildir.

BULGULAR

Araştırma sonucunda üç araştırma sorusuna cevap aranmıştır. Bu sorular doğrultusunda veriler toplanıp analiz edilmiştir. Araştırma kapsamında verilerin analiz edilmesi sonucunda İngiliz dili sınıflarının teknoloji entegre etmelerinin sebepleri açıklanmış İngiliz dili öğretmenlerinin TPAB göstergelerinin belirlenmesini sağlayan bir tasarım ortaya çıkarılmıştır. Bu tasarım derslerin planlanması ve aktif öğretim kısmı olarak iki ana başlığa ayrılmıştır. Her başlık kendi içinde çeşitli temaları ve kategorileri içermektedir.

İlk olarak, video öncesi araştırma sorularının analizleri sonucunda İngiliz dili öğretmenlerinin teknolojiyi neden derslerine aktif olarak entegre ettiklerinin sebepleri açıklanmıştır. Sınıflarına teknoloji entegre eden ve aktif olarak kullanan öğretmenlerin kendilerine özgü sebepleri vardır. Veri analizleri doğrultusunda katılımcıların altı ana sebepten dolayı teknolojiyi ve teknolojik aletleri derslerinde neden kullandıkları belirlenmiştir. Bu sebepler öğretme ortamının zenginleştirilmesi, öğrencilerin derse karşı olan motivasyonlarının yükseltilmesi, kalıcı öğrenmelerin sağlanması, okul tarafından sunulan teknolojik olanaklar, teknolojiyle birlikte bütün duyulara hitap edebilme ve dil öğrenme becerilerini geliştirmedir. Bu sebepler öğretmenler tarafından aktarılan teknoloji kullanma

nedenleridir. Ancak şu göz ardı edilmemelidir ki teknoloji destekli eğitim araştırmanın yürütüldüğü özel okulun eğitim politikalarından biridir ve okuldaki bütün öğretmenler derslerine teknoloji destekli eğitimi kullanmak zorundadırlar.

İkinci olarak araştırma sonuçlarına dayanarak Ders Tasarımı oluşturulmuştur. Ders tasarımı katılımcıların cevaplandırdığı video öncesi görüşmeler dikkate alınmıştır. Bu kısımda öğretmenler derse başlamadan önce teknolojiyi entegre etmek için bu süreçte nasıl bir yol izlediklerini aktarmışlardır. Ders tasarım kısmı teknolojinin seçimi, dersin planlanması, materyallerin hazırlanması ve değerlendirmenin planlanması olmak üzere dört ana başlıkta toplanmıştır.

Teknolojinin seçimi aşamasında öğretmenler zaten var olan teknolojileri hangi durumlarda ve neye göre kullandıklarını belirtmişlerdir. Öğretmenler derste kullanılacak teknolojileri seçerken öğrencilerin ihtiyaçlarını, kullanılacak olan teknolojik materyallerin etkililiğini, kullanılan teknolojik materyalin ara yüzünü ve kullanılacak olan teknolojinin ders planı ve ders programı ile olan uygunluğunu göz önünde bulundurmaktadırlar. Aynı şekilde dersin planlanması aşamasında öğretmenler öncelikle derste kullanılacak olan metot ve yöntemleri tanımlama, dersteki konuların organize edilmesini sağlama ve ders hedeflerinin açıklanması gibi teknoloji entegre etme sürecinde bazı unsurları da göz önünde bulundurmaktadır.

Diğer bir alt başlık ise öğretmenlerin teknoloji entegre etmeden önce derste kullanılacak olan materyalleri hazırlamalarıdır. Bu başlık altında öğretmenler karşılarındaki öğrenci grunbuna göre matertyalleri belirlemekte ve planlamakta, bu materyallerin içerik ile uyumunu gözden geçirme ve teknolojik ders materyallerini dersten önce kontrol etme gibi alt temaları açıklamışlardır. Ders tasarımı kısmı için son olarak öğretmenler teknoloji destekli öğrenci değerlendirmesinden bahsetmiş ve dersten önce değerlendirmelerin nasıl ve ne şekilde yapılacağını belirlediklerini söylemişlerdir.

Araştırmanın video verilerinin ve video sonrası görüşmelerinin analizleri sonucunda ise aktif öğretim sırasında öğretmenlerin gözlenebilir TPAB göstergelerini belirlenmiştir. Bu göstergeler öğretmenlerin gerçek ders ortamında teknolojiyi nasıl kullandıkları TPAB kavramıyla açıklamaya çalışmıştır. Ayrıca öğretmenlerin video sonrası görüşmeleri ile de bu gösterge verileri çeşitlendirilmiştir. Aktif öğretim teması derse giriş becerileri, İngiliz dili eğitiminde kullanılan teknolojik öğretim stratejileri, teknoloji destekli sınıflarda sınıf yönetimi, teknolojik problemlerle başa çıkma ve teknoloji destekli değerlendirme olmak üzere beş ana başlığa ayrılmıştır. Bu tema ve alt temalar katılımcıların hem video kayıtları hem de video sonrası görüşmelerine dayanarak oluşturulmuştur.

Derse giriş becerileri teması dikkati toplama, kullanılacak olana teknolojik materyalleri kontrol etme ve online yoklama almak üzere üç alt başlıktan oluşmaktadır. Dersin en başında öğretmenler teknoloji destekli sınıf ortamında bu üç alt temayı genel olarak uyguladıklarını belirtmişlerdir. İkinci tema ise İngiliz dili öğretim sınıflarında kullanılan teknolojik öğrenme stratejileridir. Bu tema altında öğretmenler YLP, STOYS ve internet siteleri gibi teknoloji destekli dil öğretim platformları kullandıklarını açıklamışlardır. Aynı zamanda öğretmenler otantik materyaller kullanarak, internet temelli aktiviteler yaparak ve online oyunlar oynayarak teknoloji destekli stratejiler kullandıklarını vurgulamışlardır. Son olarak ise dil becerilerini teknoloji desteğiyle geliştirdikleri üstünde durmuşlardır.

Diğer önemli bir tema ise teknoloji destekli öğrenme ortamlarında sınıf yönetimidir. Hem video hem de görüşme soruları göstermiştir ki öğretmenler sınıfta teknoloji kullanımından kaynaklı bazı problemlerle karşılaşmaktadırlar. Bu problemler öğrencilerin s-ders sırasından dağılması ve sınıflarda gürültülü bir ortam oluşmasıdır. Aynı zamanda öğretmenler bu problemlerle başa çıkma yöntemleri geliştirdiklerini belirtmişlerdir. Bu yöntemler teknoloji destekli eğitimin şeklini veya ayarlarını değiştirme, tabletler yardımıyla anında dönüt verme, öğrencileri derse odaklama, öğrencileri grup haline getirme ve online çıkartmalarla öğrencileri pekiştirmedir.

Araştırma sonuçları teknolojik problemlerle başa çıkma temasını da ortaya çıkarmaktadır. Öğretmenler kullanılamayan öğrenci tabletleri, programdan kaynaklı problemler ve internet bağlantısından kaynaklanan problemler olmak üzere üç ana temayı belirtmişlerdir. Öğretmenler aynı zamanda bu problemlerle de başa çıkma yöntemleri geliştirmişlerdir. Genel olarak bir teknolojik problemle karşılaştıklarında önce kendileri üstesinden gelmek için bir çaba sarf etmişler, çözemedikleri durumlarda öğrencilerden yardım almışlar ve son olarak da teknoloji destek birimine başvurmuşlardır. Aktif öğretim temasının son alt teması ise teknoloji destekli değerlendirmedir. Öğretmenler hem ders sırasında hem de dersten sonra öğrencileri teknoloji destekli programları kullanarak değerlendirmektedirler. Öğretmenler öğrencilerini teknoloji yardımıyla teknolojik araçlarla değerlendirme, dil becerilerini değerlendirme, öğrencilere online ödev yollama ve online testler uygulama olmak üzere dört alt temada toplanmıştır.

TARTIŞMA

Bu çalışmanın amacı teknoloji destekli yabancı dil öğretimi ortamlarında İngiliz dili öğretmenlerinin teknolojiyi derse entegre etme sebeplerini ve gözlenebilir TPAB göstergelerini belirlemektir. Bu çalışma durum çalışması olar tasarlanmış ve teknoloji destekli özel bir okulda beş İngiliz dili öğretmeni ile yürütülmüştür. Beş İngiliz dili öğretmeni ile video öncesi ve video sonrası olmak üzere görüşmeler yapılmış ve her öğremenin bir ders saaati video kayıt altına alınmıştır. Toplanan verilerin analiz edilmesi sonucunda İngiliz dili öğretmenlerinin öğretimden önce ve aktif öğretim sürecini kapsayan bir tasarım oluşturulmuştur. Video ve görüşme sonuçlarına dayanarak İngiliz dili öğretim sınıflarına teknolojiyi entegre etme sebepleri, dersin planlanması ve aktif öğretim kısımlarını kapsaya bir ders tasarımı oluşturulmuştur. İlk kısımda öğretmenlerin neden derslerinde teknoloji kullandıkları özetlenmiş, ikinci kısımda öğretmenlerin dersten önce nasıl bir süreç izledikleri dersi planlama kısmında anlatılmış ve son

olarakta aktif öğretim kısmında öğretmenlerin teknoloji destekli sınıflardaki aktif öğretim sürecinde teknolojiyi nasıl kullandıkları ve gözlenebilir TPAB göstergeleri belirlenmiştir.

Alanyazında Mishra ve Kohler'in (2006) TPAB bileşenlerini tanılamasından sonra pek çok araştırma bu kavramları açıklamaya çalışmıştır. Ancak Graham (2011) gibi bazı araştırmacılar TPAB kavramının tanımlanmasında bazı belirsizlikler olduğunu tartışmaya başlamışlardır. TPAB kavramının ve bileşenlerinin ayrı ayrı ve bir birinden kopuk tanımlar yerine birbiriyle ilişkili ve bağlamsal çerçevede tanımlamaların yapılması gerekliliği önerilmiştir (Angeli & Valanides, 2008; Canbazoğlu Bilici, Guzey & Yamak, 2016). Bu çalışma İngiliz dili öğretmenlerinin TPAB göstergelerini belirlerken dönüşümsel modeli dikkate almış ve bir bağlam içerisinde açıklamaya çalışmıştır. Çün kü bi çok araştırmacı tarafında bağlamsal çerçevede ele alınan yaklaşımların daha geniş açıdan incelemeye olanak sağladığı görüşündedir (Niess, 2005; Koehler, Mishra & Yahya, 2007, Angeli & Valanides, 2009; Jang & Chen, 2010). TPAB göstergeleri bu çalışmada bi tasarım içinde ders tasarım ve aktif öğretim kısımları içinde belirli bir çerçevede incelenmiştir.

Mazman ve Koçak Uslel'in (2011) de belirttiği gibi öğretmenleri teknolojiyi entegre etmeye iten öğrenci ve öğretmenlerin ihtiyaçlarını karşılamak gibi bazı içsel ve dışsal etkenler vardır. Araştırmanın dsonucuna bakıldığında öğretmenlerin teknoloji kullanmalarının en önemli sebebi okul tarafında teknoloji destekli eğitim politikasının benimsenmesidir. Ancak Chen (2010) öğretmenlerin teknoloji kullanmasının en önemli sebebinin öğrencilerin yaşlarına ve seviyelerine göre öğrenme ihtiyaçlarını karşılıamak ve becerilerinin geliştirilmesini sağlamaktır.

Bulgulara dayanarak aktif öğretim ve ders planlama olmak üzere iki kısımdan oluşan ders tsarımı oluşturulmuştur. Teknoloji kullanımı dersin planlanması, dersin işlenmesi ve değerlendirme kısımlarınıda kapsamalıdırr (Mouza & Karchmer-Klein, 2013). Bu çalışma da vurgulamıştır ki öğretmenler

teknolojiyi drslerine entegre etmeden önce ders planlaması yapmaktadırlar. Bu planlamayı yaparken öğretmenler öğrencilerin özellikleri, kullanılan teknolojin özellikleri ve dersin içeriği gibi bazı durumları göz önünde bulundurmaktadırlar. Aynı şekilde alan yazında ki çalışmalarda bu araştırmanın sonucunu desteklemektedir ve kullanılan teknolojinin öğrencilerin ihtiyaçlarını, özelliklerini ve beklentilerini karşılayacak düzeyde olması gerektiğini vurgulamakta (Bozdoğan & Özen, 2014) ve sınıfta kullanılan teknolojinin öğretim programı ve ders kazanımlarıyla ilişkilinderilmesi gerektiği üstünde durmaktadır (Hofer & Haris, 2011). Aynı zamanda, kullanılan teknoloji öğretim planının metod, yöntem ve stratejileriyle uyumlu olması gerekmektedir (Ertmer et al., 2012). Çalışmanın sonuçları öğrenilenlerin teknoloji ile değerlendirilmesi için de öğretmenlerin ders tasarımı sürecinde plan yaptıklarını göstermektedir.

Video ve görüşmelerin analizlerinden elde edilen aktif öğretim ve İngiliz dili öğretmenlerinin TPAB göstergeleri bu çalışmanın diğer önemli sonucudur. Öğretmneler var olan öğretim yöntem ve tekniklerini teknoloji ile harmanlayarak kullanmaktadırlar. Duhaney'in de (2012) ifade ettiği gibi tamamen öğretim stratejilerini değiştirmek yerine öğretmenler var olan yöntemleri teknoloji ile zenginleştirerek kullanmaktadırlar. Bu çalışma göstermiştir ki aktif öğretim sürecinde öğretmenler aynı zamanda teknolojiden kaynaklanan sınıf yönetimi problemleriyle ve teknolojik problemlerle karşılaşmaktadırlar. Ders sırasında, teknoloji kaynaklı gürültü ve öğrencilerin dağılması gibi veya kullanılan teknolojik aletlerden kaynaklanan şarj, bağlantı ve altyapı problemleri gibi sorunlar ortaya çıkmaktadır. Ancak, öğretmenler teknolojinin sebep olduğu bu problemlerle başa çıkma yöntemlerinide geliştirmişlerdir. Bunların dışında öğretmneler ders sırası ve sonrasında öğrenilenleri değerlendirmek için de aktif olarak teknoloji kullanmaktadırlar.

APPENDIX I: TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü ☐

Sosyal Bilimler Enstitüsü ■

Uygulamalı Matematik Enstitüsü ☐

Enformatik Enstitüsü ☐

Deniz Bilimleri Enstitüsü ☐

YAZARIN

Soyadı : Dönmez

Adı : Melek

Bölümü : Eğitim Programları ve Öğretim

TEZİN ADI (İngilizce): The Video Case Study on TPACK Indicators of English Language Teachers in Technology Enhanced Language Teaching Classrooms in Turkey

TEZİN TÜRÜ: Yüksek Lisans ■ Doktora ☐

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. ■
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. ☐

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: