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HABITS OF MIND OF PRIMARY SCHOOL TEACHERS IMPLEMENTING TECHNOLOGY DURING EMERGENCY REMOTE TEACHING

AMBER LEE TUYSUZOGLU

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İHSAN DOĞRAMACI BILKENT UNIVERSITY

ANKARA

JUNE 2023

I dedicate this to my loving and supportive family.
You are my reason for living.

Habits of Mind of Primary School Teachers Implementing Technology During Emergency Remote Teaching

The Graduate School of Education
of
İhsan Doğramacı Bilkent University

by

Amber Lee Tuysuzoglu

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GRADUATE SCHOOL OF EDUCATION

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Amber Lee Tuysuzoglu

May 2023

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum & Instruction.

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| Assoc. Prof. Dr. Jennie Faber Lane (Advisor) | Asst. Prof. Dr. Servet Altan (2nd Advisor) |

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum & Instruction.

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ABSTRACT

Habits of Mind of Primary School Teachers Implementing Technology During Emergency Remote Teaching

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MA in Curriculum and Instruction

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June 2023

This study used narrative inquiry to analyze how four primary school English teachers described the challenges they faced while teaching remotely during the COVID-19 pandemic and how they handled these challenges, particularly with technology during online instruction. The purpose of this exploration was to identify the ways of thinking or Habits of Mind participants exhibited when dealing with the challenges. Through thematic analysis, participants' narratives were aligned with intelligent behaviors. The study found that there were seven Habits of Mind commonly used by teachers to address the problems they faced during emergency remote teaching. A conceptual framework was used to link these Habits of Mind to educational theories. Constructivism, self-regulated learning, and incremental learning were among the theories that could be used to explain teachers' persistence, inquiry, and continuous efforts to learn technology, self-improvement. The outcomes indicate that these educational theories can be emphasized in teacher education programs to foster constructive and supportive Habits of Mind that will help teachers address and overcome technological challenges.

Key words: Habit of Mind, COVID-19, ICT integration, emergency remote teaching, teacher dispositions, intelligent behaviors

ÖZET

İlkokul Öğretmenlerinin Acil Uzaktan Eğitim Sürecindeki Teknoloji Kullanımlarında Zihin Alışkanlıkları

Amber Lee Tuysuzoglu
Eğitim Programları ve Öğretim Yüksek Lisans Programı
Danışman: Doç. Dr. Jennie Farber Lane
2. Danışman: Dr. Öğr. Üyesi Servet Altan
Haziran 2023

Bu çalışma dört ilkokul İngilizce öğretmeninin COVID-19 salgınında acil uzaktan eğitim sırasında karşılaştıkları zorlukları nasıl tanımladıklarını ve bu zorlukların üstesinden nasıl geldiklerini analiz etmek için anlatı sorgulaması tekniğini kullanmıştır. Çalışmanın odağı özellikle çevrimiçi eğitim sırasında karşılaşılan teknolojik zorluklardır. Bu araştırmanın amacı katılımcıların karşılaştıkları zorlukları aşarken sergiledikleri düşünce şekillerini ya da Zihin Alışkanlıklarını tespit etmektir. Tematik analiz aracılığıyla, katılımcıların anlatımları akıllı davranışlar ile özdeşleştirilmiştir. Çalışma, acil uzaktan eğitim boyunca katılımcı öğretmenlerin karşılaştıkları problemleri ele almak için yaygın olarak kullandıkları yedi Zihin Alışkanlığı olduğunu ortaya çıkarmıştır. Çalışmada, bu Zihin Alışkanlıklarını eğitimsel teorilerle bağdaştırmak için bir kavramsal çerçeve kullanılmıştır. Öğretmenlerin kararlılığını, araştırmacı tavırlarını, teknoloji öğrenimi için devamlı çabalarını ve kişisel gelişimlerini açıklayabilecek eğitim teorileri arasında yapılandırmacı öğrenme, öz düzenleme ve artımlı öğrenme yer almaktadır. Çalışmanın sonuçları öğretmen eğitimi programlarında öğretmenlerin teknolojik zorlukları fark edip aşmalarına yardımcı olabilecek yapıcı ve destekleyici Zihin Alışkanlıklarını geliştirebilmeleri için bu eğitim teorilerinin vurgulanabileceğini göstermiştir.

Anahtar kelimeler: Zihin Alışkanlıkları, COVID-19, BIT entegrasyonu, acil uzaktan eğitim, öğretmen mizaçları, akıllı davranışlar

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CHAPTER 1: INTRODUCTION

Introduction

Throughout history teachers have been asked to shape and develop the youth of the future. Innovative teachers have always inspired and generated change in teaching pedagogy and methodologies. Since the time of the single classroom to now, we can see how individuals can create a difference in how we teach, and that difference can spread to other teachers and institutions. We can name some of the most well-known innovative teachers such as Plato who believed in education for all (Sanni & Momoh, 2019), Hasan Âli Yücel and the Village Institutes he opened in Türkiye during the 1940's (Gönder, 2021) and John Dewey's pragmatic approach to education where students should learn by doing (Dewey, 1922/2015). These are just a few innovators that have made an impact on educational practices. These practices and theories can still be seen in practice in the classrooms of today. In the 1980s Apple Computer, Inc began an initiative to develop and research innovative uses of computers in K-12 education (Dwyer et al., 1991). This innovative program began a shift in research and has led to a change in the use of technology in education. Notably, the Apple Computer initiative changed how classrooms could use technology and can be identified as part of the shift to a more student-centered pedagogy (Ross, 2020).

While we remember these innovative teachers, one should also recall the resources they had at their disposal and the modern challenges they did not have to overcome. Some modern challenges include the widespread and varied integrations of technology into the lessons, how to reach the modern digital native students,

managing classes with differing and special needs of students. The need to integrate modern technology into the teaching and learning process has become an emergency due to the challenges that the world has gone through; namely the COVID-19 pandemic.

Background

In December 2019 a new illness, COVID-19, began spreading throughout Wuhan, China (Zhu et al., 2020). At first it was compared to a flu like disease. As it became more widespread, the world also understood the severity of the virus. On March 11, a worldwide pandemic was declared (World Health Organization [WHO], 2020). Depending on the country the dates vary but within the span of a few months the world had shut down, which also included schools. Many schools were left scrambling to answer the question; "how can we teach online?" Thus, the schools began emergency remote teaching (ERT). Teachers' previous technological skills or comfort levels did not matter. All classes had to be conducted through the computer.

Remote teaching existed before the pandemic, of course. Most of these online classes were autonomous and self-directed. The concept has evolved with asynchronous and synchronous distance education programs. There were concerns regarding distance education when compared to the effectiveness of face-to-face classes. Therefore, a meta-analysis of research regarding the successfulness of distance education programs in comparison with face-to-face was conducted and Means et al. (2014) learned that if implemented with care and thought and pedagogical grounding online learning can be as successful, if not more successful than face-to-face learning.

Unfortunately, with the suddenness of the declaration of the pandemic, educational institutions were unable to provide this pedagogical grounding. Many

institutions were not prepared for the ERT and because of this, there is criticism that the programs they implemented were not grounded with pedagogy or accepted methodology (Hodges et al., 2020; Teräs et al., 2020). In addition to not having distance education plans, most institutions were not prepared for the technological requirements of distance education.

In addition to the pedagogical and technological changes, we need to also account for the internal and unobservable behaviors. Fullan and Hargreaves (1993) have stated that "Teachers are more than mere bundles of knowledge, skill, and technique" (p. 67). How can we account for the internal? Especially during ERT. To identify the ways teachers struggled, managed, and overcame we need to be able to understand some internal aspects of the person, attitudes, behavior, or dispositions.

Teacher's Attitudes and Dispositions as Habits of Mind

Teachers' attitude towards information communication technology (ICT) affects their willingness to integrate it, a teacher with a positive attitude towards ICT will be more likely to implement it into the lessons (Hismanoglu, 2012; Kersaint et al., 2003). Attitudes and dispositions are terms that are used interchangeably frequently in research, but they are consistently used as a pre-disposition or outcome identified to create a more successful or well-adjusted teacher (Freeman, 2007). According to Dottin (2009) dispositions are both definitional and philosophical.

The current study follows the definition of dispositions put forward by Costa and Kallick (2000b) that views dispositions as a Habits of Mind (HoM). These habits indicate "that the behaviors require a discipline of the mind that is practiced so it becomes a habitual way or working toward more thoughtful, intelligent action" (Costa & Kallick, 2000b, p. xii). Additionally, Costa and Kallick believe that the HoM include many skills, and also attitudes, cues, past, experiences and proclivities.

Moreover, Costa and Kallick (2000) prescribe that the skills associated with each Habit of Mind are not implemented in isolation. When a person encounters a problem, they generally use more than one habit of mind in conjunction with their passions, motivations, and values. HoM are malleable and not fixed, people can learn and change causing their behaviors to evolve. When teachers exhibit all 16, they can develop and conduct effective lessons. These HoM might also affect how they view innovations and technology within their classroom—and relevant to this study—from outside the classroom.

Problem

On Friday, March 12th, 2020, the Turkish government announced their decision to close the schools beginning March 16th and to enter a lockdown due to the COVID-19 pandemic. ERT would begin on Monday, March 23 (MoNE, 2020). This immediate need to adapt and change all lessons and materials into a completely new system created stress on the educators, the students, and the parents. Iivari et al. (2020) found that the "planning of a single lesson took much more time compared to normal classroom teaching" (p3). When the schools closed, administrations and teachers were forced to pivot and make sudden and immediate changes with regard to how education would continue. They now needed to adapt the course content to a new, previously unused methodology and learn how to do this with new programs and technologies in addition to the need to implement it within days.

Within the context of the school involved in the current study, the week between March 16 and 23 was the planned spring break, with three professional development days. With the announcement of the lock down, these days were converted to planning days. The planning days focused on the question of implementing an online education program with no previous experience. The news,

rumors and mixed messages created a chaotic atmosphere in the school. Essentially, teachers were given three working days to create autonomous learning activities to be used on EBA.gov.tr (Eğitim Bilişim Ağı). This is an abbreviation for the education information network created and managed by the Ministry of National Education (MoNE) "To support the use of effective materials by using information technology tools at school, at home, in short, wherever needed, and to integrate technology into education" (RaillyNews, 2020). Unfortunately, the website could not support the entire country's educational needs at the same time and was extremely slow and crashed often. As such, on March 27th the chosen school switched to a synchronous distance learning program implemented over the Zoom platform and sharing work through the school Moodle platform which latter changed to K12net, a school information management system.

Technology in the classroom has made great strides in improving the effectiveness of learning in the classroom, but it has also been shown to have mixed results based on the individual institution or the teachers' personal preferences (Hismanoglu, 2012). ERT forced all teachers to immediately adapt and accommodate teaching through an alternative platform and delivery method, despite their varying technological experiences or their personal desires to integrate new technologies into their classrooms. There was no time for additional training, it was up to the teachers to use trial and error on what was working and what was not successful. The challenge to adapt to online education was compounded by the International Baccalaureate Primary Years Program (IBPYP) curriculum. How can communicative and inquiry-based lessons be facilitated in an online format? How can we generate group projects while supporting young learners in their home? How can we guide the student through trouble shooting technical problems when most

teachers are still insecure in their own ability. Emotionally, how can we connect through the screen? These are some of the questions the teachers faced at the beginning.

During the first month of the pandemic and initial closures, the researcher observed confusion, stress, and chaos. Within the department there were multiple meetings and practice demonstrations to collaboratively learn and implement how to give a lesson in this new way. Eventually, it became manageable and the new normal during that time, but there was a constant stress of how to adapt to the next challenge and a fear of what would happen next.

Purpose

This study aims to understand which HoM English language teachers in a private primary school in Türkiye used to manage and overcome both the new technological requirements and the abrupt timeframes these changes were required in. This study used in-depth narrative research from four English teachers who taught before, during and after ERT. By identifying the intelligent behaviors associated with the different HoM we can understand how the teachers at this school managed, and the specific challenges they faced and link these to the emergent research following the end of the ERT.

Research Questions

This study investigated the narratives of four PYP primary English teachers from a private school in Türkiye, to identify intelligent behaviors associated with Habits of Mind to answer the following research questions.

1. What are the challenges primary teachers were faced with when adopting new technologies into their educational practices during the emergency remote teaching?

2. What intelligent behaviors can be identified from teachers' explaining how they managed their emergency remote teaching during the COVID 19 pandemic?
    a. Which Habits of Mind are evident from these intelligent behaviors?
    b. Which educational theories can be used to explain teachers' Habits of Mind?

Significance

ERT created distinct and unique challenges for teachers, schools, students, and parents. Throughout this process each group faced and overcame these challenges in their own ways. Which challenges were faced by four English teachers at this primary school during their ERT transition and teaching program were identified. These challenges were compared to the emergent research in COVID-19 ERT and added to the research concerning K-12 schools, specifically primary school age teachers.

To examine how teachers faced and overcame the distinct challenges they faced, the researcher sought to identify the ways of thinking they employed. As such, Costa and Kallick's (2000b) 16 Habits of Mind were used to identify the intelligent behaviors teachers displayed when meeting the challenges of ERT. Furthermore, the current study linked these Habits of Mind to educational theories by using a conceptual framework developed by Altan et al. (2019).

Prior to COVID-19 there was various research linking HoM to successful teaching practices and personal development, but there is limited research in conjunction with ERT. This research adds to the literature by identifying which challenges were faced and how the teachers surmounted the challenges and the associated educational theories they used. By understanding how teachers managed

and overcame both the suddenness and the new technological requirements of ERT we can better understand how to support and prepare teachers and schools for possible future emergencies. Furthermore, by identifying the prevailing educational theories, teacher educators can better endorse supportive and constructive ways of thinking by highlight these theories during their professional development programs.

Definition of Key Terms

Habits of Mind (HoM): A Habit of Mind refers to having a disposition toward behaving intelligently when confronted with a problem to which the answer is not known (Costa, 1991).

IB Primary Years Program (PYP): which implements an "inquiry-based, transdisciplinary curriculum framework that builds conceptual understanding" (IBO, n.d.).

Ministry of National Education (MoNE): (MEB, Milli Eğitim Bakanlığı) is the ministry in Türkiye, which is responsible for the supervision of public and private educational system, agreements, and authorizations under a national curriculum (OECD, 2013).

Information and Communication Technologies (ICT): is a diverse set of technological tools and resources used to transmit, store, create, share, or exchange information. These technological tools and resources include computers, the Internet (websites, blogs, and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices) and telephony (fixed or mobile, satellite, visio/video-conferencing, etc.) (UNESCO, 2009).

Emergency Remote Teaching (ERT): ERT is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances (Hodges et al., 2020).

CHAPTER 2: REVIEW OF RELATED LITERATURE

Introduction

This chapter provides a review of the relevant literature regarding technology in the classroom, challenges teachers faced during ERT, HoM, and the theoretical framework. After exploring challenges to technology in education, the literature concerning technology in the language classrooms is examined, which is important to this research in terms of the context. This research supplements the literature that emerged during COVID-19 and the emergency remote teaching (ERT and several of these studies are featured in this chapter, particularly those that report on common challenges from all over the world. Another key aspect of this study is teacher dispositions and this aspect is defined and explained through HoM and intelligent behaviors. This explanation is incorporated into the theoretical framework that was used in this research.

Challenges to the Use of Technology in Education

There is no one easy solution to implementing technology into the classroom successfully. It has been identified as a modern challenge that all educators face regardless of their subject or level. In fact, as part of UNESCO 2030 agenda for sustainable development, UNESCO published the "Competency Framework for Teachers (ICT CFT)" which is an "international framework that sets out the competencies required to teach effectively with ICT". This is the third version of this framework and it is envisioned to support and strengthen the use of ICT in Education and guide the creation of teacher-training policies and programs (UNESCO, 2018). Each iteration takes the current trends into consideration and offers solutions. Overall, ICT integration into the classroom has been around since the 1980's, but

inconsistently. It has been proven effective in some classrooms or subjects and not in others (Ross, 2020). The question of which aspect influenced the success or lack of can be argued from many angles (Pittman & Gaines, 2015). Some of the struggles discovered in the research which are discussed; the generational gaps, personality or preferences, hardware availability, pedagogical, training, and lesson subject.

In past research, it has been identified that a possible challenge to technological integration can be attributed to the generational gap (Prensky, 2001a, 2001b). This gap has been identified as a factor which can impact learning and ICT implementation in the classroom. The terms “digital native” and “digital immigrants” are used to describe the age gap in terms of technology use. A digital native is a person born after the 1980s and designated to have grown up with technology in their daily lives. A digital immigrant is a person who was born before the 1980s and who did not grow up with technology but learned it later in life. Prensky (2001a, 2001b) articulates that digital natives learn differently than students of previous generations. Prensky asserts that digital natives’ brains work differently. He infers that early exposure to digital stimulus changes the way the brain develops. Additionally, Prensky (2001a) points out that teachers (digital immigrants) are struggling to change their teaching methods to match this difference in the students. Teachers should not use the one-size-fits-all model of education with this generation. Digital natives need digital technologies embedded in all aspects of education. They also need to see the connection to the bigger picture. They enjoy collaboration and seeking information, and they lack long attention spans and are in favor of customizable content either online or personally (Kivunja, 2014). Furthermore, Serna and Serna (2021) state that students born after 2005 are a novel generation of learners. In addition to being a digital native, they are maturing in a time when

information is available to them instantaneously. As such, they need challenges and problems to solve in order to facilitate constructive and meaningful learning, otherwise they will turn to the internet to learn and answer their questions and not the educational system or the teachers.

When we examine the challenge of technology integration from the perspective of the teachers and the classroom. Pittman and Gaines (2015) believed that the availability of technological resources in the classroom has a positive impact since the teacher is motivated to use them. However, teachers adopt and integrate ICTs into teaching and learning activities if they have the ability or knowledge to judge the effectiveness of the technology, and not by its mere existence in the classroom (From, 2017; Manco-Chavez et al., 2020; Mavrou & Loizou-Raouna, 2017). In his study, Ross (2020) took a retrospective look at some major technology integration research programs over the last 30 years and highlighted that the results from different programs and various schools had varying results in terms of the successfulness of their goals. In some instances, the success or lack of significant success could be attributed to the individual teachers' internal motivations or inadequate training in the new technology being implemented. In the rush and excitement to start integrating the contemporary tools in the classroom, the importance of the teacher in ensuring the success of the implementation can be overlooked (Ross, 2020). This rush to integrate and implement new technologies without adequate support can be observed in Türkiye from the Fatih project which aimed to install an interactive whiteboard (IWB) in classrooms (MoNE, n.d.). Despite a plethora of international research exalting the success and academic benefits of using IWB in the classroom (Bernát et al., 2020; Olivares & Castillo, 2018), in Türkiye the success was not as expected despite the country's widespread

employment in almost every classroom. The perception was that IWB were useful, but the teachers had to “learn through trial and error” (p. 174) and they did not “have the required skills and knowledge of how to use... [or] how to enhance their practice” (Öz, 2014, p. 174) When the teachers do not have the prerequisite technological skills and are not given training or support, how would this addition to the classroom be expected to make a positive impact?

Furthermore, another aspect where teachers can struggle to implement ICT into the classroom could be due to varying pedagogical practices. It has been found that certain pedagogical practices can more easily lend themselves to the integration of ICT into the classroom. According to Honey et al. (2000) it is important to understand the give and take between teachers, students, and technology. When the learning process is considered, which approach the teacher ascribes to affects ICT success. A teacher centered approach where the teacher communicates information to students and uses various assessment techniques to assess memorized content (Duraku, 2021) or a student-centered approach where learning is conducted through debates, questions among students, discussions, and assessment is where conceptual change is assessed (Prosser & Trigwell, 1999). As such, the flexibility of student-centered approach (Lundin, 1999) creates an environment more conducive to various ICT integration. Additionally, Pittman and Gaines (2015) present that constructivist and sociocultural learning theories can facilitate the integration of technology into the classroom. As constructivists learn from their environment and are dependent on content and creating connections to their own lives, technology can successfully be used to enrich the learners’ interactions by providing a virtual environment in real time and life (Pittman & Gaines, 2015; Roblyer, 2002).

Another realm which influences the success of ICT integration is professional development, both pre and in service. The current pre-service program used for teachers in Türkiye was redesigned in 2006 by the Higher Education Council (HEC); it "includes subject field courses, courses on general pedagogy and courses on general cultural knowledge" (Inal, 2018, p. 28). Seferoğlu (2006) found, compared to the previous pre-service program, the updated program emphasizes methodology and practice components. Bay et al. (2021) highlights the fact that the more exposure to ICT and opportunities pre-service teachers have, the better they increase their future abilities and self-confidence. This is in line with studies conducted in China (Sang et al., 2010) and Germany (Pozas et al., 2022) They prescribe that pre-service programs need to seamlessly incorporate ICT into the classroom as a model, explicitly teach pre-service teachers how to use and plan with ICT and give opportunities for the practical experience. Otherwise, the graduated teacher is intimidated and less likely to incorporate ICT without further professional development.

In addition to the training and teachers' current stage of ability and knowledge, Ertmer et al. (2012) found that teachers' beliefs and attitudes towards technology are a barrier for the integration of technology into the classroom. One participant from their study was quoted "I don't know how to do it and I don't have the time to learn, and if I learn, I don't have time to do it" (Ertmer et al., 2012, p. 429). However, Ross (2020) and Zheng et al. (2016) found that teachers' attitudes are generally consistently positive when they are able to attain experience with technical support and when they feel adequately prepared to use and incorporate new ICT. This implies teachers need to be ready and comfortable in order to implement a new ICT technology or application in the classroom. This is consistent with the advisory from UNESCO (2018) which asserts that as teachers gain digital

competencies, they are better able to use the tools to save time and ease many administrative tasks.

Another variable that can influence teachers' ability and inclination to use technology is their discipline of study. Bay et al. (2021) found that not only do different pre-service schools give varying levels of ICT confidence, but there are also differences between the different disciplines of study. In a meta-analysis of 10 journal publications, Zheng et al. (2016) found that English language arts, reading, writing, math, and science showed improvements from various technology integration programs. The literature shows that in today's world ICT integration into the classroom is no longer a preference. This integration is a worldwide momentum to prepare the next generation for their life and the digital competencies they will need to be a successful contributor to society. Likewise, different subject areas are encouraged to integrate computers and associated software and programming into their lessons. In specific, this paper focuses on English Language teachers and examine how technology integration can benefit the learner and the teacher.

Challenges to the Use of Technology in EFL

Historically, coursebooks were the traditional teaching resources used to teach the English language. In addition to the coursebooks, various reading texts were used as samples of the target language and as a skill building practice. As the technology has advanced, teachers use of realia (authentic videos or recordings) in the classroom has become widely accessible. In general, in the field of English language teaching computer assisted language learning (CALL) is the umbrella term covering programs used on the computer with the goal of teaching a language. Some of these ICT tools which can be utilized in a language class are: Skype, Google, MSN (Microsoft Network), e-mail, blogs, podcasts, wikis, and YouTube

(Hismanoglu, 2012). Today there are many programs that can be added, but most fall under the term of Web 2.0 tools. Additionally, under the CALL umbrella there is an addition of mobile assisted language learning (MALL). MALL are tools specifically available on a mobile device (smartphones and tablets) which promote or facilitate language learning (Irudayasamy et al., 2021). Many of the various applications can be used as mobile apps and there is a lot of crossovers between CALL and MALL. In a literature review of MALL practices and successful outcomes, it was found that vocabulary acquisition and improvement was prevalent in many studies. The studies also credited MALL for improving proficiency skills. To a lesser degree listening, writing, reading, and speaking skills as well as peer and self-assessment were shown to benefit from MALL practices (Irudayasamy et al., 2021).

The field of English as a foreign language (EFL) or English as a second language (ESL) research has similar challenges to successful ICT integration, such as needing monetary support for the hardware and adjust the class infrastructure (Putri & Syafryadin, 2022). As with teachers in other subject areas, EFL teachers report lacking needed time to research about and develop plans for new technology (Aminullah et al., 2019; Putri & Syafryadin, 2022). Other studies point out that language teachers lack competence in ICT, which might affect teachers' attitudes and openness to technology (Kopinska, 2020; Putri & Syafryadin, 2022). Many studies conclude that for successful integration of ICT in the language classroom, teachers will need more education and experience (Aslan & Zhu, 2016; Hismanoglu, 2012; Kiliçkaya & Seferoğlu, 2013; Kopinska, 2020; Pozas et al., 2022; Torsani, 2016).

Within Türkiye Korkmazgil and Seferoglu (2018) found that pre-service EFL teachers in Türkiye feel that technology is an inevitable part of life, and they should be incorporating it in the classroom, but overall, they feel insecure about their

proficiency in assessing the usefulness or being able to successfully implement them in their class (p. 64). This is of note when there is research pushing forward the benefits of technology in language classrooms. Furthermore, pre-service courses need to teach how to use the resources to teach a language, ICT is a tool or medium to teach language and should be implemented thoughtfully and in line with pedagogy specific to second language acquisition (SLA) methodologies (Akayoglu et al., 2020; Kiliçkaya & Seferoglu, 2013).

Despite the plethora of research encouraging the integration and implementation of ICT into the language classroom, as with any subject area is ultimately the decision of the institution. How much they require a teacher to use or how much technological access they provide for the teacher can vary. These decisions can be based on economic factors (Putri & Syafryadin, 2022) or pedagogical factors (Tu et al., 2022). The needs of the curriculum and institution can arouse different opportunities. Unfortunately, with the current state of affairs and the rapid spread of COVID-19, schools discovered that this option has been taken away from them. As such all courses and all institutions underwent a transformation from face-to-face education to a virtual or distance education.

Challenges to Technology Exacerbated by ERT

Online and distance education is not a new phenomenon. The concept of online education has been utilized since the late 19080s. In this section, the background of online or distance education is briefly explained and the differences between this and the ERT is examined. This is followed by the challenges educators faced during ERT.

Emergency Remote Teaching

In 2014, Means et al. published a book which detailed the pedagogical theories as they apply to the different distance or online education programs. Their book incorporated many various research and common discussions and prescribed methods and policies to help educators understand and facilitate online education. These choices should be planned by both the curriculum developer and the institution based on the goals of the online program. The authors state that "there are forms of online learning that help some people achieve some types of learning goals under some conditions. But not every online learning experience is effective any more than is every classroom-based experience" (Means et al., 2014, pp. 178–179). This is just as true for ERT, but during this situation there was less time and forethought in the program creation and implementation. This immediate need allowed no time to prepare or plan an online education program.

Bozkurt et al. (2020) and Hodges et al. (2020) cite Means et al. (2014) with regards to how successful online or distance education can be, but both strongly express that ERT has to be acknowledged as different from these. This difference is primarily in the time frame and planning. ERT required a sudden switch which did not allow planning or forethought nor were curriculum designers involved (Hodges et al., 2020). During the ERT there was a rush to implement a fully online program within days or at most a week ahead of time. The objective was not to create a fully formed education program but instead to provide access to instruction quickly and reliably during this unprecedented period of time (Hodges et al., 2020). ERT was "about surviving in a time of crisis with all resources available, including offline and/or online" (Bozkurt et al., 2020, p. 2).

Hodges et al. (2020) stresses that this is not the first instance where schools have had to adapt to an alternative teaching method, but it is the most widespread interruption. As such, they recommend that we should evaluate the success of the learning not based on academic achievement and perceptions of the stakeholders but on the effectiveness of the program in terms of "context, input, process elements" (Hodges et al., 2020, p. 14). Learning from this experience can help institutions develop an emergency plan that can be quickly implemented to meet the needs of the teachers and the students.

Challenges to ERT

Within the emerging literature after COVID 19, various challenges that teachers faced were outlined. Ferri et al. (2020) identified the importance of understanding the challenges and strategies in order to prepare for the future more accurately. The following studies are reviewed to provide insights into a variety of challenges revealed during ERT, including the digital divide, teachers' time and effort, student capacity, and assessment.

One major challenge identified is the digital divide. The line between the socio-economic classes; access to technology, internet and even having a space to conduct their work in (Bozkurt et al., 2020; Erlam et al., 2021; Ferri et al., 2020; Pattnaik et al., 2023). It was found that even when support was given to the poorer students in terms of technology and internet access, they had no space to work in and would ultimately be sharing their space with siblings or parents telecommuting. Additionally, these students lacked the self-management and technological competencies needed to effectively use the given technologies to successfully learn compared to students on the other side of the digital divide (Bozkurt et al., 2020).

This challenge has brought to the forefront the socio-economic differences and it is an important issue.

At the onset of the Pandemic, one major challenge was how suddenly the transition from face-to-face to remote teaching occurred (Kamisli & Akinlar, 2022). Erlam et al. (2021) conducted research at a New Zealand university concerning the teachers transition to ERT. They found that with the lock downs being announced and the education plans needing to be implemented so suddenly, there was a very limited time to pivot. This also contributed to the confusion and "shifting sands" teachers faced, where changes were publicly announced before teachers heard them from their institutions (Erlam et al., 2021). Like Erlam et al. (2021), it could be observed that there were also many times when teachers were told to do one thing and then quickly asked to change because the results were not as expected.

As a result of the short amount of time the teachers were accorded to pivot and begin ERT, some teachers unsuccessfully attempted to teach their content exactly the same as they did during face-to-face (Bozkurt et al., 2020). The more experienced, innovative and creative teachers were able to identify that this was a failure and change. Teachers periodically needed to make a pedagogical shift from teacher-centered approach to a student-centered approach (Duraku, 2021). According to Huang et al. (2020) the ERT methodology needs to stimulate learning and independency. Additionally, the course should aim to support individual needs. This change of methodology and approach was a bigger challenge to some than others, depending on their personal pedagogy because it required adapting it to specific students and the teacher needed to intuitively understand what was needed (Haleemunnissa et al., 2021).

When adapting and redesigning the course material for ERT, Huang et al. (2020) and Iivari et al. (2020) point out that planning a ERT lesson took much more time than planning did previously. Whereas Iivari et al. (2020) adds that their participants (teachers) did not indicate a willingness to innovate and use creativity to create new lessons integrating available technologies. This could be similar to the findings of König et al. (2020) which found that teachers who previously owned the hardware and were familiar with the various software programs were able to transition to ERT more effortlessly. Similar to previous research mentioned, they further recommend ICT classroom integration and pre- or in-service trainings.

One aspect which could contribute to the time-consuming nature of planning during ERT was redesigning the lessons to an online format. Kaden (2020) advises that classes should be re-thought with how the content can be taught in an effective way online. This questioning and problem solving took time and research. Al-khresheh (2022) researched English language teachers' creativity and innovation during ERT and found that experienced teachers were successful in identifying what was not successful in their attempts and had the ability to research tools effectively and create innovative lessons and implement them successfully. This finding was reinforced by König et al. (2020) who found that less experienced newer graduates or the "digital natives" as Prensky coined, were not able to transition as smoothly to ERT lessons in comparison to more experienced teachers. Conversely, Duraku (2021) linked the two factors when she found that teachers which understood ICT and had the teaching experience to be able research new applications were able to use them effectively.

A teacher needs an awareness of students' progress and attention within the class. As such, during COVID student motivation (Huang et al., 2020; Žižanović et

al., 2021) was a challenge. In the classroom, body language can easily be observed and interventions, either in the teacher adjusting activities or individual physical contact, can be made to maintain attention. Zhoa (2021) states that in "e-teaching and e-learning through various online platforms, the role of emotions and their regulation is more critical than traditional modes of education. This abrupt shift, per se, caused many problems and challenges for both teachers and learners" (p. 3). Huang et al. (2020) advocates that student-centered methods help maintain student motivation, giving them open concepts and collaboration.

Another challenge highlighted in the emergent literature is the home-work life balance. Erlam et al. (2021) found that COVID-19 and ERT negatively affected the home-work life balance. While some of his respondents appreciated the ability to not have to leave their house or commute to work, many cited the line between work and home life blurred. Not only did their daily life commitments intrude on their work time, but the opposite was also just as true. With the increased screen time required for meetings, creating more resources, student communications and planning time they found the screen time requirements exhausting. Bozkurt et al. (2020) also highlights the extra pressure the female gender experienced during this time to take care of the house chores the children's needs and their professional lives, with many women being asked to take a leave from work to better be able to care for the house. This is of considerable note as teachers in Türkiye are predominately women. In the 2020-2021 academic year there were 1.1 million teachers of which almost 700,000 are female teachers (MoNE, 2021).

Another challenge that teachers and academic institutions faced was assessment. How can assessment be conducted through a virtual system? With the ability for help to be given to the students from the internet as well as family

members, teachers were faced with a dilemma of how to assess students' progress in a way that is accurate to the students' individual progress. As Türkiye has a large student population, over 19 million (MoNE, 2021), and extensively uses high stakes exams to rank institutions and students. Bozkurt et al. (2020) outlined that during ERT Türkiye's assessment policy changed to "continuous, process-based assessment and evaluation methods" (p.86). While being a progressive response to a rigid exam-based education system, it left teachers with the stress of implementing new assessment in a new method, consequently adding to the stress and workload created during ERT.

Most of the emergent research has been found to have some mixed results, while a few participants were able to transition smoothly or successfully, most identified the difficulties faced for varying reasons. One point can be made that they were able to make the transition and keep moving forward despite the initial struggle. Despite the differing backgrounds, the teachers made adaptations and learned how to teach in the new environment. This ability to overcome and cope can be internal and is of interest to the current study. How can we identify the unobservable?

Teachers' Attitudes and Dispositions

In the review of the literature, to understand teachers' ways of thinking and their affect or influences on being an effective or successful teacher, it was discovered that there is prolific research concerning this topic, many of which were conducted prior to 2020. In light of the focus of this study and the current state of affairs. The researcher discovered a gap in the research. It was found during the preliminary work that there was a lack of research regarding teacher dispositions or attitudes in conjunction with the pandemic. As previously cited, there are many studies in terms of technology and the transition (Akayoglu et al., 2020; Barba-

Sánchez et al., 2022; Bohak Adam & Metljak, 2022; Manco-Chavez et al., 2020; Molero Jurado et al., 2022; Paños-Castro et al., 2022; Pozas et al., 2022; Tu et al., 2022). These studies examine how teachers transitioned and the various factors which affected the transition including teacher attitudes towards technology. Additionally, research was found which examined the technology adaption model (TAM) of primary and secondary education levels post COVID-19 and looked at teachers' dispositions from the standpoint of a person being pre-disposed to action based on personal beliefs or feelings with regards to ICT integration (Sadeck, 2022). While teachers' attitude research during the pandemic could be found, this research was relevant only in explaining different teachers' opinions towards distance education, whether it was successful or how they felt in their readiness and support during the transition (Karalar & Sidekli, 2021).

Pre-COVID-19 research provides multiple definitions and interpretations of teacher attitudes and dispositions. One perception of teacher dispositions in the research considers teacher dispositions as a predisposition, specifically something that should be sought after in the person before they become teachers. Their outlook is if these predispositions are present, this person is predicted to be a more effective teacher (Carroll, 2012). Other researchers have different ideas about dispositions. They believe dispositions and attitudes can be taught and are a learned outcome (Diez, 2007). In addition, to these differences in philosophy, there are differences in definitions of the terms, dispositions, attitudes and habits.

To understand the literature pertinent to this study, there needs to be a brief history of the relevant disposition definition. A century ago, John Dewey sought to define the terms disposition and habits. In his works, the terms were used interchangeably. In 1922, Dewey referred to disposition as an underlying motivator

and organizer for intelligent behavior (Dewey, 1922/2015). He also emphasized that dispositions are acquirable, are able to be developed and are different from innate characteristics, traits or temperaments. For Dewey, dispositions are human qualities which can be altered through educational experiences.

Consequently, the research for dispositions and habit contains a few predominate researchers who use and ascribe to Dewey's definitions. One is Dottin (2009) who asserts that there is a cognitive element in dispositions and a relationship between intelligent professional conduct and dispositions. Dottin (2009) also conceives that dispositions can be nurtured. He links dispositions with intelligent professional behavior by considering when individuals practice these mental behaviors, they are showing intelligent professional conduct (Dottin, 2009).

Habits of Mind

Whereas Dottin refers to intelligent professional conduct, Costa uses the term intelligent behavior. Costa (1991) said that when a person is confronted with a problem for which the answer is not clearly known, this is when you can observe intelligent behavior. Costa and Kallick referred back to Dewey's (1922/2015) beliefs that problem solving behavior is connected to behaving intelligently. These behaviors were grouped together and categorized into 16 Habits of Mind (Costa & Kallick, 2000b). These identified HoM are as the following:

1. Persisting
2. Managing impulsivity
3. Listening with understanding and empathy
4. Thinking flexibly
5. Thinking about thinking (metacognition)
6. Striving for accuracy and precision

7. Questioning and problem posing
8. Applying past knowledge to new situations
9. Thinking and communicating with clarity and precision
10. Gathering data through all senses
11. Creating, imagining, innovating
12. Responding with wonderment and awe
13. Taking responsible risks
14. Finding humor
15. Thinking interdependently
16. Remaining open to continuous learning

A Habit of Mind is associated with certain intelligent behaviors which identify the HoM being applied to overcome the challenge being presented. Table 1 presents different intelligent behaviors associated with the sixteen HoM defined by Costa and Kallick (1991, 2000a, 2019). To give an example, *applying past knowledge to new situations* would display being able to take knowledge learned previously and applying it in a way that is beyond what it was initially taught for. Such behaviors can reveal information about an individual's cognitive abilities, talents, and dispositions (Diez, 2007a).

Nevertheless, while observing participants to identify the HoM, Burant et al. (2007) warns to be careful when observing intelligent behaviors because while some are apparent and observable, some are not, and attempting to make inferences can lead to mislabeling and misunderstanding, especially when they are taken in isolation and not in the context of the whole picture including culture, aspirations, history, goals, and the pedagogical requirements. This is of note when applying to teacher education and teacher effectiveness, because the different pedagogies develop and

change overtime, with shifting definitions of what is effective and what is not. On the other hand, Diez (2006) outlined a system for assessing dispositions, which was a collaborative discussion between a teacher candidate and an educator that required identifying dispositions that motivated their behavior in order to help the candidate become an effective teacher or identify their need to leave the program. Burant et al. (2007) identified this process as promising but problematic in the depth and time requirement needed for this process to be successful.

Table 1

Habits of Mind and Their Associated Intelligent Behaviors

HoM	Intelligent Behaviors
Persisting	Persevering in task through to completion; remaining focused even when stuck
	Being comfortable with ambiguous situations
	Not giving up easily
Managing impulsivity	Taking time and thinking before acting
	Remaining calm, thoughtful and deliberate
Listening with understanding and empathy	Gently attending to another person demonstrating an understanding of and empathy for an idea or feeling Trying to perceive another's point of view and emotions
	Holding in abeyance one's own thoughts in order to perceive another's point of view and emotions
Thinking flexibly	Changing one's perspective and generating alternatives as well as considering a variety of options
	Considering alternative points of views
Thinking about thinking (metacognition)	Reflecting on experiences
	Being aware of one's own thoughts, feelings and actions and their effects on others
Striving for accuracy and precision	Striving to always do one's best
	Checking for ways to improve constantly
	A desire for exactness, fidelity and craftmanship
Questioning and problem posing	Developing questioning strategies to produce data
	Asking questions that make causal connections and relationships
	Finding problems to solve
Applying past knowledge to new situations	Accessing prior knowledge and work to transfer knowledge beyond the situation in which it was learned
	Calling upon one's store of knowledge and experience as sources of data to solve each new challenge
	Abstracting meaning from one experience, carrying it forth, and applying it in a novel situation
Thinking and communicating with clarity and precision	Striving for accurate communication in both written and oral form
	Avoiding over generalizations and distortions

HoM	Intelligent Behaviors
Gathering data through all senses	Being aware of the pathways for gathering data and making use of a variety of sources
	Paying attention to the world around and gathering data through all of the senses
Creating, imagining, innovating	Conceiving problem solutions differently, examining alternative possibilities from many angles
	Generating new and novel ideas, fluency and originality
	Try a different way
Responding with wonderment and awe	Finding the world as an awesome and mysterious entity
	Being intrigued with phenomena and the surrounding beauty
Taking responsible risks	Drawing on past knowledge, being thoughtful about consequences
	Accepting confusion, uncertainty, and the higher risks of failure as part of the normal process
	Not behaving impulsively
	Being adventuresome; living on the edge of one's competence
Finding humor	Placing value on having sense of humor
	Appreciating and understanding others' humor
	Finding the whimsical and unexpected
	Being able to laugh at situations and themselves
Thinking interdependently	Being able to work with and learn from others
	Being sensitive to the needs of others
Remaining open to continuous learning	Continuously searching for new and better ways, resisting complacency
	Being eager to learn throughout lifetime
	Striving for improvement, growing, learning, modifying, and improving oneself

Note. Adapted from (Altan et al., 2019; Costa & Kallick, 2000b)

Habits of Mind and Educational Theories. Previously, Dottin highlighted Dewey's idea that "dispositions are tied to reflective thinking, being mindful and thoughtful" (Dewey, 1922/2015; as cited in Dottin, 2009, p. 86). Dottin furthers the discussions of HoM by focusing on thoughtfulness and mindfulness. In creating their framework, Altan et al. (2019) used Dottin's (2009) concept of mindfulness and thoughtfulness to group the learning theories because according to Dottin, these two help substantiate pedagogical dispositions as habits and are key factors to acting intelligently. The theories which are directly related to learning are in the thoughtfulness category and the theories which support learning are grouped in the mindfulness category. Subsequently, Altan et al. (2019) connected constructivism, incremental theory and self-regulated learning theory with thoughtfulness and mindfulness and emotional intelligence with mindfulness. In this framework, it was

found that some HoM could be linked to more than one educational theory, as opposed to just one, as some of them do. Following is a brief description of each learning theory and the category which is aligned with that theory.

Educational Theories Related to Thoughtfulness. Constructivism is a learning theory which is considered a descriptive theory and not prescriptive with rigid procedures used to create lessons (Wasson, 1996). Constructivism is engaged with the idea of knowledge and meaning being constructed by the individual. "The central principles of constructivism are that learners can only make sense of new situations in terms of their existing understanding. Learning is an active process in which learners construct meaning by linking new ideas with their existing knowledge" (Naylor & Keogh, 1999, p. 93). In the classroom, it has been found that a student-centered approach is successful and in line with the constructivist learning theory (Matthews, 2003). According to the framework, ten of the HoM are aligned with constructivism: applying past knowledge to new situations; creating, imagining and innovating; gathering data through all senses; metacognition (thinking about thinking); questioning and posing problems; remaining open to continuous learning; taking responsible risks; thinking and communicating with clarity and precision; thinking flexibly; and thinking interdependently.

Incremental theory is grounded in Dweck's growth mindset. The growth mindset can be observed in learners who are motivated by the idea that they can learn and improve themselves and they consider that a person's true potential is unknown, therefore that it is not possible to know what can be accomplished (Dweck, 2006, p. 7). This mindset helps create positive attitudes in such students and has been shown to help with depression. Dweck (2006) found that while college students with growth mindsets were still susceptible to depression, they managed it

more effectively; “the more depressed they were, the more they took action to confront their problems [...] and the worse they felt, the more determined they became” (Dweck, 2006, p. 38). Additionally, research has found that positivity towards learning is key to successful learning, and motivation in the teacher and the student could affect this achievement (Haimovitz et al., 2011). In the HoM literature, it suggests that learners who look for ways to improve, and who look at challenges as opportunities to learn, are successful. These learners have high expectations and are eager to be lifelong learners, they are striving for improvement, growth and improving themselves (Costa & Kallick, 2008). The framework connected the following HoM and their associated intelligent behaviors with incremental theory: persisting, remaining open to continuous learning, responding with wonderment and awe, striving for accuracy, and taking responsible risks (Altan et al., 2019).

Self-regulated learning theory is where students approach “educational tasks with confidence, diligence, and resourcefulness” (Zimmerman, 1990, p. 4). Furthermore, Zimmerman finds that self-regulated learners understand their existing skills, and when they do not currently possess that skill. They are able to proactively seek out information and can take the steps needed to master skills independently (Zimmerman, 1990). Teachers should model strategies which help monitor personal learning progress, and model and teach goal setting strategies. With younger students, Florez (2011) recommends “teaching children self-regulation first requires strong teacher self-regulation. Children learn to regulate thoughts, feeling, behavior and emotion by watching and responding to adults’ self-regulation” (Florez, 2011, p. 6). Altan et al. (2019) connected the following HoM to self-regulation theory: applying past knowledge to new situations; creating, imagining and innovating; gathering data through all senses; managing impulsivity; metacognition (thinking

about thinking); persisting; questioning and posing problems; and taking responsible risks.

Educational Theories Related to Mindfulness. Under the category of mindfulness, two educational theories were identified to have commonalities with intelligent behaviors from the 16 HoM. As previously mentioned, these are Emotional Intelligence and Mindfulness.

Emotional Intelligence is not an educational theory but is important to education because as Ferro (1993) states "emotions cannot be separated from learning" (p. 29) and it is important to support the development of students' emotional intelligence. Emotional intelligence is a set of skills theorized to be used in order for a person to understand and express the emotions inside, and to understand the emotions in others, as well as to assist the regulation of emotions in oneself and others and the use of feelings to motivate, plan and achieve. Furthermore, Goleman's (1995) definition of emotional intelligence includes characteristics of persistence, empathy, impulse control and delayed gratification. Life may present many influences which support or oppose developing emotional intelligence including family, friends, relationships and stress. Goleman (1995) outlines many different programs in schools and how they teach emotional intelligence and highlights that in the current state of affairs, many students are not getting adequate formative emotional competency at home and the school is needed to help give children proper examples and lessons on how to understand and manage their emotions. He emphasizes that schools don't necessarily need a separate class, but the teacher is an important tool, as each interaction a teacher may have at school, and their responses are models and examples for the students to observe and to internalize. As such, he recommends that pre-service teachers are trained in emotional intelligence. Altan et

al. (2019) linked emotional intelligence with the following HoM: finding humor; gathering data through all senses; listening with understanding and empathy; managing impulsivity persisting; taking responsible risks; thinking and communicating with clarity and precision thinking flexibly; and thinking interdependently.

Mindfulness habits can provide stronger emotional self-regulation and add to the flexibility of teachers and students. There has been ample research concerning mindfulness and specifically defining what mindfulness is. Kabat-Zinn (2003) focused on the idea that the individual is aware and conscious of their thinking processes and being present in the moment, and one moment at a time. However, Langer (2000) focuses on the individual having a "flexible state of mind" (p. 220) and also being engaged in the present and focusing their attention on new things and contexts. Finally, Hoyt (2016) suggests that mindfulness is the capacity to be present to what is happening within and around us, and it is what allows us to "become fully alive in each moment" (p. 128). Furthermore, Hoyt (2016) adds that all three definitions can be utilized in practice within the educational settings. Such practices could include thought before action, maintaining attention and providing thinking time for students. The majority of a student's time is spent in schools and as such, mindful practices could support students with the emotional competence and help manage their negative emotions. The framework found that the intelligent behaviors from four HoM that align with the mindfulness theory; gathering data through all senses; managing impulsivity; responding with wonderment and awe and taking responsible risks (Altan et al., 2019).

Conceptual Framework: Dispositions as Habits of Mind

For the current study, the researcher utilized the conceptual framework

constructed by Altan et al. (2019). According to this framework, if we are to link dispositions, HoM, and teacher success, we need to also link educational theories. For this aspect, Altan et al. (2019) investigated the connections between the intelligent behaviors and the learning theories they exemplify. They used deductive content analysis of the literature and created a theoretical framework, allowing educators to use specific educational theories to help develop desired HoM.

CHAPTER 3: METHOD

Introduction

This chapter discusses the conventions of narrative inquiry and its positioning in the context of this research. This research sought to understand the Habits of Mind (HoM) teachers used when faced with the challenges of emergency remote teaching (ERT). First, the specific context of this study is described and a brief background concerning the participants involved in this study and the type of sampling is described. Finally, participant questions and the methodology of the narrative analysis used to answer the research questions is detailed.

Research Design

This study used narrative inquiry to learn the stories of four English primary school teachers. Narrative inquiry is a qualitative research method, which Clandinin and Connelly (2000) describe as being a "three-dimensional narrative inquiry space (...) inward, outward, backward, forward and situated within place" (p. 49). Narrative inquiry builds the story of the participants from their viewpoint and is viewed as a window into a person's world from their view. It creates collaboration with the researcher and adds depth and detail into the narrative versus a one-time interview or survey. According to Connelly and Clandinin (1990), people are natural storytellers, and the narrative research is an undertaking to understand how individuals experience the world and to create meaning from their personal experiences. It is the responsibility of the researcher to foster an understanding of the realities from the participants' experiences during the narration (Clandinin & Rosiek, 2019).

In the analysis stage, the researcher used Creswell's (2015) six steps of analyzing qualitative data from the bottom up. In this methodology, the researcher

collates the data, transcribes, repeatedly reads through and codes the text (p. 236). Additionally, the researcher used Braun and Clarke (2022) thematic analysis to identify emerging themes and categories from the narratives.

Context

This study was conducted at nonprofit foundation school in Ankara. This primary school follows the Turkish national curriculum defined by MoNE. Additionally, the school is an authorized International Baccalaureate (IB) Continuum school and implements a Primary Years Programme (PYP) framework. The PYP is a curriculum framework created by the International Baccalaureate grounded in research. Influenced by constructivist and social-constructivist learning theories, the framework "offers a transdisciplinary, inquiry-based and student-centered education with responsible action at its core, enabling students to learn between, across and beyond traditional subject boundaries" (IBO, 2022). The framework is created for students aged 3-12, but in Türkiye ends around age 9-10 or the end of grade four, which is due to the national school system of 4-4-4. The framework is designed to incorporate the three pillars of school life: the learner, learning and teaching, and the learning community (IBO, 2019). The PYP encourages students to have their own agency for their learning, culminating in an exhibition project at the end of the primary school. The school integrates the two programs simultaneously. Due to the pandemic, the school switched to ERT conducted synchronously online.

At the end of the 2019-2020 academic school year, the length of the class hours was a 30-minute lesson with a 30-minute break in-between. The students attended five lessons a day, two of which were English. The teachers continued with the classes they had before COVID. There were two classrooms, two lesson hours a day, for each English teacher.

During the 2020-2021 academic school year, all lessons were conducted online during the first semester and Hybrid during the second semester. Hybrid teaching is where the teacher is teaching both online and face-to-face classes. In the first semester, the class schedule had eight 40-minute lessons a day with 10 - and 15 -minute breaks. The English lessons were given every day in two 40-minute lesson blocks with a 10-minute break between them. Each teacher in this study was responsible for two separate classes and taught four lessons total each day. During the second semester Hybrid teaching was allowed for students who chose to return to limited face-to-face lessons. The students who chose to attend face-to-face came to school two days a week. During these two days, the English teachers conducted their four online lessons and then went into a physical classroom twice, entering one lesson for each of their assigned classrooms. Another teacher conducted one English lesson face-to-face for each class.

Participants

In the primary school's English department, there are 11 English teachers for grades one through four. The kindergarten and pre-school teachers are excluded because they taught primarily face-to-face during the ERT. Three teachers started in the 2021-2022 academic year and are excluded from participating since they did not teach at this school during the ERT. Of the remaining eight teachers, the researcher and their work partner are not included. This leaves two native teachers and three non-native teachers. To have an equal number of native and non-native teachers, the researcher used purposive sampling to select two non-native speakers and two native speakers; the former included a fourth grade and a second-grade teacher, and the latter included a first-grade teacher and a second-grade teacher. All four teachers have at least 10 years of teaching experience as well as master's degrees.

Instrumentation

The aim of this study was to explore the English teachers' reflections and identify intelligent behaviors the participants displayed when faced with the challenges presented during ERT. Therefore, two semi structured interviews were conducted.

To begin creating the participants' narratives, the researcher constructed semi structured interview questions to prompt the teacher participants to reflect on their experiences during ERT. The interview questions were adapted by the researcher from Şahbaz (2022) who was also advised by Assoc. Prof. Dr. Jennie Farber Lane as an experienced qualitive researcher and Asst. Prof. Dr. Servet Altan as an experienced narrative inquiry researcher and an expert in the field of HoM. The adapted interview questions were jointly reviewed, and the aforementioned advisors offered feedback and insights for additional revisions. The researcher and the experts approved the final set of questions for the initial interview (Appendix A). The researcher piloted the questions with a peer who teaches at an English prep school and took her feedback and results into consideration.

In narrative inquiry, the researcher is considered a tool in the co-constructing of the narratives. The researcher as a teacher and a peer can neither begin nor conclude educational research without bias arising out of personal experiences, "Neither teacher nor researcher emerges unchanged" (Clandinin, 2019, p. 41). The researcher is a teacher at this school and went through this time of tribulation with the participants. During the co-constructions, some situations were cited but without the details that would be needed for people who did not live and work with them during this time. As Clandinin (2019) describes the positioning of the teacher researcher within narrative inquiry as following: "in terms of narrative it is

appropriate to view this process as the negotiation of two people's narrative unities" (p. 41).

The second interview was a member check to finalize the co-constructions. The week before the participants were sent a list of the 16 HoM with a description of each. They were also given a transcription of their initial interview to refresh their memory. During the second meeting, the researcher reviewed the HoM found from the narratives and jointly came to agreements with the participants. If there was disagreement, the participant was asked to expand their meaning. It was through this process the narratives were co-constructed.

Method of Data Collection

Before beginning the interviews the researcher received permission from the Ministry of National Education (MoNE) (Appendix A) and approval from the Bilkent ethics committee (Appendix B) to conduct the research. Data collection for this study was conducted in two parts. The first part was the main interview. At the onset of the interview the participants were asked to sign the informed consent forms (Appendix C). Each participant was informed that their participation was voluntary and would remain anonymous. Once the participants confirmed their willingness to participate, the interviews were conducted and recorded. The participants were asked the interview questions (Appendix D) about their experiences during the ERT as well as some questions about their backgrounds in terms of how much technology experience and/or professional development they have had. The interviews lasted approximately 30-40 minutes. Although these interviews were short compared to typical narrative studies because their experiences with ERT were recent they were able to explain the challenges in detail. Their descriptions clearly explained experiences that were the hardest for them and which were the most prominent in

their minds. Within the timeframe of the interviews, they were able to give details about what they faced and how they overcame it.

The second part of the data collection was member checking. In this part, the participants were sent a transcription of their interview as well as the list of the 16 HoM and their associated intelligent behaviors. They were asked to refresh their memory of their interview and then read the HoM and their associated intelligent behaviors. The researcher then gave the participants the list of the HoM identified from their narratives and asked if they agreed with these findings. The participants agreed with the analysis or if they disagreed, they gave additional details that were missed in the initial interview. During this stage, the participants identified the aspects of their narratives they felt needed further explanations. Two participants added to their narratives during member-checking. One realized upon review of the narratives, that too many of the negative aspects of ERT were highlighted. She wanted to add that she has memories that were funny. She shared that sometimes the challenges created unique, lighthearted situations. The other participant provided more detail about how she re-designed her lessons and the time consuming nature of this process.

Methods of Data Analysis

The researcher used a dictation function to transcribe the interviews and confirmed the accuracy against the recording. In analyzing the narratives, the researcher first used deductive analysis to identify intelligent behaviors which correlated with the 16 HoM. The researcher used underlining and created a table with quotes and the relevant HoM they correlated to. During this stage, a transcription of one interview was sent to Asst. Prof. Dr. Servet Altan, as an expert in the Habit of Mind field, for blind coding. The results were compared, and the differences were

negotiated. The researcher identified more intelligent behaviors than the expert; therefore, the researcher and the expert had a discussion of the differences until a consensus was established. Through this process, the researcher learned how to analyze the data more effectively A second interview was coded and compared to ensure reliability.

To analyze the challenges the teachers faced during ERT, the researcher used thematic analysis. In this process, it is important to bear in mind that:

> Researcher subjectivity is the primary tool for reflexive TA, as knowledge generation is inherently subjective and situated. Your subjectivity is not a problem to be managed or controlled, to be gotten rid of, but should be understood and treated as a resource for doing analysis (Gough & Madill, 2012; as cited by Braun & Clarke, 2022, p. 9)

During this stage, the researcher used the six phases of thematic analysis outlined by Braun and Clarke (2022). Phase one was where the researcher became familiar with the data set. In this phase, the researcher transcribed the audio recordings and repeatedly read the transcriptions and made notes as they arose in the mind of the researcher. Phase two was coding. In this phase, the researcher color coded the transcriptions and used both implicit and explicit meanings in the coding. Phase three was generating initial themes. In phase three, the researcher identified shared patterns and meanings across all four narratives and began identifying the candidate themes in terms of the challenges they faced. Phase four was developing and reviewing themes. In this phase, the researcher analyzed the candidate themes and situated them in the context of the study as well as across all four narratives and made the decisions concerning organization. Some themes were deemed hierarchical, and some needed to be split into separate themes. Phase five was refining, defining

and naming themes. In this phase, the researcher created names and made tables with quotes from each example of the themes. Phase six was the writing up phase in which the results were written up. The researcher used a literature check to validate the codes and themes: The literature was reviewed to see if other researchers identified similar challenges in their findings.

CHAPTER 4: RESULTS

Introduction

This chapter presents the results. The first section presents the findings of the thematic analysis of the narratives and the specific challenges the teachers faced during the ERT. The second section presents the results of the analysis concerning the HoM from the narratives. This is followed by applying the theoretical framework connecting the HoM with the educational learning theories.

Thematic Analysis of Participant Narratives

Challenges Teachers Faced

The first research question focused on the challenges the English teachers faced when adopting the new technologies into their educational practices during ERT. Overall, the participants described challenges similar to the literature reviewed. In analyzing the narratives, the following five challenge themes emerged: work life balance, technological challenges, planning, and spatial differences. Table 2 shows how often each theme was mentioned by the participants; the themes of planning and spatial differences were mentioned frequently. Consequently, subthemes were found for these themes. Each of these themes and subthemes are discussed in detail in the following sections.

Table 2

Frequency of Reference Regarding Teachers' Challenges

Challenges	Martha	Violet	Ayşe	Elif	Total
Spatial Differences	6	1	6	4	17
Attention	3	7	4	3	17
Technological Challenges	5	4	3	3	15
Planning	6	4	2	3	15
Re-Designing	3	4	4	5	16

Challenges	Martha	Violet	Ayşe	Elif	Total
Trial and Error	4	2	3	4	13
Research and Training	2	3	4	2	11
Overwhelmed or Intimidated	5	0	3	3	11
Work Life Balance	3	1	1	2	8

Work Life Balance

Martha and Elif both cited long working hours and the difficulty this caused. Being in front of the computer from sunup to past the sun going down, teaching, planning, and communicating were notable challenges. Martha described the extra time everything took and being in front the computer for long hours and the effect it had on her eyes and brain.

> *because you weren't just teaching online you were in front of the computer the whole day long giving feedback was incredibly tiring it's much faster to take to take a pen and a piece of paper and write on somebody's work and change things and underline things than it is to give feedback online that was really tough and being in front of the computer from 8 in the morning tell sometimes 7, 8, 9 or 10 o'clock at night all day every day it's really tiring like hurts your eyes hurts your brain like I was tired (Martha)*

Elif also shared similar comments about time consuming feedback, but she also described the process of identifying the technology available while identifying what the students needed and then making everything from scratch and how long this process took. She described the questioning process, and then needing to research what could help, and then creating a new lesson. According to Elif, she could not use the previously created materials or lesson plans for her grade level. Every lesson and every learning material was made new or transferred to an online resource to reach the learning outcomes needed.

> *It was so much planning it was another challenge non-stop working day and night, but we were so excited to give nice things to children because they were all excited to do the lessons that way too it was nice for them but to get at that point we had to work really, really hard. (Elif)*

Technological Challenges

The technological challenges described were varied. One major challenge that severely affected lesson management was interruptions in internet connections. In the middle of the lesson, the teacher's internet would drop, and she would have to wait, re-log in and re-join the ZOOM meeting. These outages rarely affected everyone because of the varied locations of the students and teachers around the city.

Martha found the technological challenges especially difficult because she claimed the least amount of ICT experience before ERT. "*I'm not the world's most technologically developed person I know enough to get by, but teaching online is completely different than teaching face-to-face especially when teaching primary, you know*." Martha reported she felt very overwhelmed and stressed; she eventually felt comfortable, but it took time and practice before getting to that point. She also worked very hard researching, giving online feedback, and attending online webinars to help her improve and become more comfortable with the technology. Martha also described how since returning to face-to-face lessons; the software and various programs transferred and have become beneficial. Furthermore, Martha is *"pleased*" she learned them.

Elif's technological challenges were about how to adapt to the needs of the digital format for her age group. She also stated she did not believe continuing as if she was still face-to-face was effective. Sending worksheets to be printed and emailed back was not the way to move forward. She explicitly outlined the questions

she asked herself before creating lessons specifically to be online, attract students' attention, reach her language acquisition goals, and how to effectively integrate software.

> *When they wanted to speak, how would they do it? How would we let them do it? How could we do our lessons using old materials on Zoom? Was it even possible or did we need to change lots of things? How would we change them? What we would do? These were all the challenges at the beginning.*

Among the participants, Elif had the most prior experience with technology. Her previous job used virtual meeting software and online collaborative programs as well as various software.

Violet stated she had basic ICT knowledge beforehand. She cited that the technology her lessons necessitated required her to conduct research and forced her to have many trial and error lessons before it was useful and effective.

Planning

All four participants felt planning was a challenge. Martha, Ayşe, and Violet all discussed how they had to "over plan" and had to always have extra activities ready to address different learning paces. Martha, Ayşe, and Elif all agreed that extensive planning was needed to re-design the lessons to adapt them to the new platform.

Re-designing, Trial and Error, Research and Training. Martha, Ayşe and Elif discussed how they had to redesign and not just adapt their lessons. In order to reach their lesson objectives, they had to research software that was available online, adapt what was available and then try it out in the classroom. Ayşe described how during the lessons sometimes no matter how much she researched and planned, it did not go according to plan. At times they had to deal with shortcomings in students'

technological abilities, which would require stopping and troubleshooting with the students. Ayşe described how she would need to pivot and quickly find a different way to teach either by using a different technology or not using it at all.

> *So, you prepare a very nice lesson. You say yes this will work but then you do it in class and then because some kids they were not so good at using technology. So that created a problem, so you have to explain everything, or they got too excited because they were far away from you. There was no one at home, so no one could help them. So, it was just I think that was like the big challenge for us like. OK. (Ayşe)*

Elif and Martha talked about challenges faced with using Zoom and how in the beginning they had no idea how to share screen, guide student annotation, or create and manage breakout rooms. All of these skills were learned and developed through trial and error. Martha said, "*but in the beginning it was like who's scribbling on my screen why is he doing that like what's going on I got so overwhelmed*."

All four participants discussed researching new ways, methods, or technologies to help provide the best experience for the students. They also highlight that their specific department shared their knowledge. When a colleague found a new ICT that was useful, they would share and demonstrate it for the others. For example, as a teacher who is advocating for ICT use in the department, I helped and demonstrated the use of Google Suits for education, specifically how to create assignments and the different options to give feedback through Google Forms and Google Classroom.

Overwhelmed or Intimidated

All participants felt overwhelmed in the beginning or when new requirements were handed to them from policy changes or hardware changes, but they also shared

that over time they were able to adjust to things and it became the new normal after practice and revision. Only Ayşe indicated that while many aspects improved and were adaptable to online education, her writing lessons never became easier. During face-to-face lessons, she was able to give written feedback on students' writing and they could immediately write a final draft incorporating this feedback. She felt overwhelmed and tried many different ways to give feedback. Ayşe started to dread the lessons because they were becoming more time consuming. Eventually, she created a system through shared Google Docs and individualized links sent through private chat to each student. When Google Classroom was introduced at the school and had aspects that could create less work for her feedback process, she felt too overwhelmed to change again and chose to keep the more time-consuming system she had established.

Spatial Differences

Spatial difference was the label given to the emerging theme describing all the differences teachers cited from the physical change of switching from the classroom to the computer. As Ayşe discussed in her writing lesson example, some of the spatial differences created additional difficulties in online learning. In the narratives, all of the participants cited cases where this was a challenge. In the classroom, the participants found it easier to observe students' progress and ability. Interventions or adjustments could easily be done, or a teacher could quietly give individual intervention. Following are some quotes concerning the different spatial challenges Ayse, Elif and Martha described.

- *I think when you're in primary school having the rapport with the kids and knowing the little characteristics and no even mentioned something like oh you got new trainers that's nice you know, you got your haircut*

that's lovely, kind of thing makes you closer to them it helps build trust and they feel safe and secure and so you build up a relationship with them I found it very difficult to do that online towards the end obviously yeah you get better at and you learn techniques (Martha)

- *. . . .with the technology we couldn't see what they were doing. We didn't have a chance to observe them when they were writing. If they moved the cameras down, they wouldn't see the screen, so they couldn't do that either. So, we had to collect their work every day through the K12 system and download and check and give feedback, written feedback, correcting their mistakes. (Elif)*
- *Like it was really hard. The writing was the most challenging part because in class we were able to give them like instant feedback and they could move on to the next draft. But here you have they had to finish it, then you have to give a differentiated work because you had to give them feedback. (Ayşe)*

Attention. In line with the struggle of the spatial differences, the participants found that because of the virtual environment, it was more difficult to grab or hold the students' attention. This added to the need to "over plan" and have extra resources and back up plans ready for when the students' attention started drifting. At times, because the teachers were always trying to make sure students were involved and engaged, the teachers felt the lessons were over-filled with activities and there were no calm moments or "down time" like there were in the classroom. Following are several comments made by the participants regarding keeping students' attention:

- *It wasn't easy to let everybody speak, turn on their microphones, turn it off properly. It took lots of time. It was a time-consuming classroom, so it was more like watching videos to warm up, playing little game like Word Wall Games. They would shout out the answers all together as a class. Letting them speak one by one was really hard. Whereas in class you would just see their fingers and let people speak in quickly, but here on technology. They had to be comfortable with that too, but it was not that easy (Elif)*
- *I was so concerned with the kids I didn't want them to be bored whereas in the classroom you know you can see that they're getting fidgety and you can give him like a brain break or you say OK everybody stand up shake out your arms do this do that but I was very conscious of OK the activity should take no longer than this much time this activity should take this much time and to keep the lesson moving forward it's quite a fast pace (Martha)*
- *also, a big challenge with some of the kids did get like lost. they sat there took her like a step back and trying to capture some of the kids who are very low in English that was hard to capture trying get them involved when the English is already so low (Violet)*
- *it was really hard to keep everyone like everyone's focus because you were saying something, but then you could see some kids was like turning off their like cameras and then you have to go, and we had to get them into the lesson (Ayşe)*

Habits of Mind

After identifying the themes that emerged from the analysis, the next step was to connect the themes to HoM. This connection was accomplished by looking at the intelligent behaviors that illustrate each HoM and linking them to the study's themes and subthemes. The analysis revealed that the participants exhibited similar behaviors when facing the challenges experienced during ERT. Table 3 shows which HoM could be observed from the participants narratives.

Table 3

Narrative Analysis for Habits of Mind

HoM	Martha	Violet	Ayşe	Elif
Applying Past Knowledge to New Situations	√	√	√	√
Striving for Accuracy and Precision	√	√	√	√
Persisting	√	√	√	√
Questioning and Problem Posing	√	√	√	√
Creating, Imagining, Innovating	√	√	√	√
Thinking Interdependently	√	√	√	√
Remaining Open to Continuous Learning	√	√	√	√
Managing Impulsivity		√		
Listening with Understanding and Empathy				√
Thinking About Thinking (Metacognition)		√	√	
Thinking and Communicating with Clarity and Precision			√	
Gathering Data Through All Senses				
Responding with Wonderment and Awe				
Taking Responsible Risks			√	
Finding Humor	√	√		
Thinking Flexibly	√		√	√

Persisting

The most frequent and routinely described HoM was persisting. As previously discussed, the intelligent behaviors associated with persisting are the following: persevering in a task through to completion; remaining focused even when stuck; and not giving up easily. provides some quotes from each participant pertaining to the HoM of Persisting.

Table 4 provides some quotes from each participant pertaining to the HoM of Persisting.

Table 4

Persisting

Participant	Quotes
Martha	*Yeah, towards the end you get comfortable with the program that you're using it's like we were thrown in at the deep end, but we got used to it was OK in the end.*
	you know we would all research little things that we were trying to find out about to help us on zoom and we share them with each other like Google forms like you know that safe share program and like you know the sharing your screen or at the clock and time and things like that just little techniques to get you through, but we were literally just surviving
Violet	*It was always just progressing, progressing, progressing, trying to make them happy, trying to make them comfortable all the time. But yeah, in the end it affective.*
	It was always just progressing, progressing, progressing,
Ayşe	*At the beginning it was very hard, very hard like because it's a total new thing to us. But as you go on, as you see like the kids enjoying and then as you see oh, I found something new. I tried it and it worked you felt that's like success and then you wanted to go ahead.*
	First it felt like a really overwhelming because suddenly you're just in front of the computer and it was at the beginning. Everyone is listening to you. So that was first a shock, of course. But later. You had no choice. You had to go ahead.
Elif	*So, we had to collect their work every day through the K12 system and download and check and give feedback, written feedback, correcting their mistakes. So, it took a lot of time too, but technologically we were able to do it*
	But we were so excited to give nice things to children because they were all excited to do the lessons that way too. It was nice for them but to get at that point we had to work really, really hard.

Questioning and Problem Solving

Another Habit of Mind that could be observed from all four participants was questioning and problem solving. The associated intelligent behaviors include the following: developing questioning strategies to produce data; asking questions that make causal connections and relationships; and finding problems to solve.

When the participants describe how they managed the abrupt transition to ERT, they explain how they had to question themselves in order to plan how to move forward. They mention how they questioned themselves regarding why they conducted the face-to-face lessons the way they did, and how they could reach the

same goals in the new format. They also had to question the students' technological abilities and levels with regards to their specific ages before they could create a lesson. They also talk about researching new technologies and questioning their usefulness or how they could be adapted to their specific needs. Participants reflected after each lesson by asking themselves questions such as: how can I make this work better? Or how can I better support the students in this lesson? According to the research in computer assisted language learning (CALL) and mobile assisted language learning (Mall), there are no specific sets of tools to be used in the classroom. Any software or hardware which facilitates the language learning process both dependently and independently can be included. As such, the teachers spent significant time questioning the needs of the lessons and then solving the preliminary problems they could foresee. In Table 5, there are quotes from the participates about this challenge.

Table 5

Questioning and Problem Posing

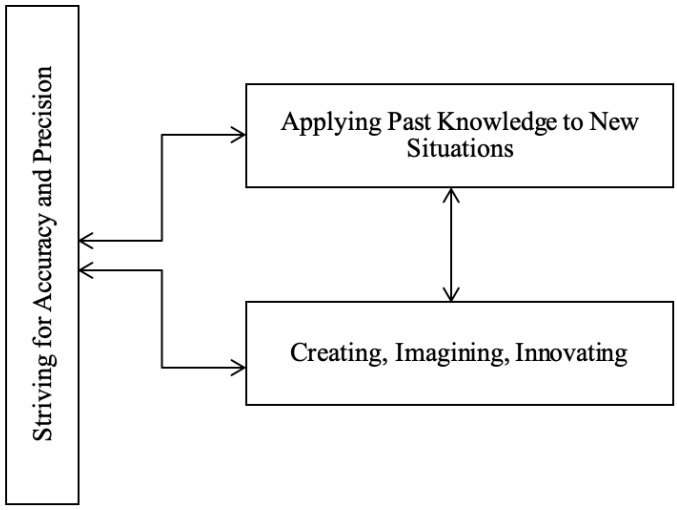
Participant	Quotes
Martha	*OK, I really like this but how can I make it age appropriate?*
Violet	*What do we want at the end of it? How can I make it user friendly and for example Google forms? Do we want the kids to write their name? Do we want them to write the e-mail address? Do we want them to write the class? Can they type? What can the students do? Are the parents going to be able to assist them? How are we going to give feedback on it, on the strategy...How long are we going to give for the kids to complete the task? What are we going to do if there's a problem with it? What happens if they need help? We can't be there next to them. How we're going to help them?*
Ayşe	*But how could I give like feedback to a listening activity? How could I give feedback for a writing activity? So that was like really challenging*
Elif	*With the computer and zoom screen, we started doing our own things. And then we saw what we needed, what works in class and what we don't have. And then when we met those extra technological things. We found out how we could. Um, Apply them to our lessons. And then we started questioning. OK, what? What else do we need? What else can we look for? Because you don't know what you're looking for. Is this working? Yes. These questions just came over time. And we. Started answering them.*

Three Interrelated Habits of Mind

Some HoM have crossover and lend themselves to working together or working sequentially. The next three HoM examined are presented sequentially and simultaneously in the narratives, as displayed in Figure 1. In ERT all four participants describe how all their materials and lessons had to be created from scratch. They had to go through the process of applying their past knowledge to new situations and then creating, imaging, and innovating new lessons, while also striving for accuracy and precision. Following are the specifics for each HoM from all four participants.

Figure 1

Three Interrelated Habits of Mind



Applying Past Knowledge to New Situations

The participants describe that they asked themselves the questions and moved on to create new lessons for ERT, and this displayed some of the intelligent behaviors associated with applying past knowledge to new situations. The behaviors found to be associated with the HoM applying past knowledge to new situations are; accessing prior knowledge and work to transfer knowledge beyond the situation in

which it was learned, calling upon one's store of knowledge and experience as sources of data to solve each new challenge, abstracting meaning from one experience, carrying it forth, and applying it in a novel situation. When the teachers were redesigning their materials and lessons, they had to use their experience and knowledge in new and creative ways. They had to research and understand how to effectively use the resources available. Violet even mentions how now that they are back to having semi-normal classes, she uses many of the resources or skills she developed during ERT in her face-to-face lessons. Table 6 highlights some of some quotes that illustrate this HoM.

Table 6

Applying Past Knowledge to New Situations

Participant	Quotes
Martha	*OK I really like this but how can I make it age appropriate like oh some kids like songs you know some kids like dancing some kids like drama just change out the activities all the time and keep them interested yeah*
Violet	*Things that's changed our whole teaching, now we've gone back to face to face. We still use all of those a lot, but yeah, it took a long time.*
Ayşe	*You have to make it really interactive, or you just lose the kids. In class there can be pauses while we are looking over their work but online, we had to find game links and many other things to support them otherwise they would get distracted, and it was hard to get them back. If they're really good at using the screen the computer, then they can like play games*
Elif	*But in time we could see that some students couldn't contribute to the lesson. So how could we do it? I wanted them to say something. But when I addressed to the students that you can say this and this person, then some of the others would be either left out or we would just spend the lesson by giving the chance to each of them the chance to speak. So, it wouldn't work that way. I said, OK, shout out the answer together, get ready, turn on the microphones at the same time, 123, let's say the answer kind of thing. Everybody was trying to. I mean, I was trying to get them to say something at the same time this, this, this happened when I saw that it wasn't that possible that easy to get them involved in the lesson that's one thing. So, in time we saw them, yeah, I could address as we went along.*

Creating, Imagining, Innovating

After questioning the needs, abilities, and available resources, the participants had to create new content and lessons. Due to the uniqueness of the situation, they

were in, the apparent intelligent behavior displayed was trying it a different way. However, they also displayed; conceiving problem solutions differently, examining alternative possibilities from many angles and generating new and novel ideas, fluency, and originality. The participants explain and emphasize that they created and rebuilt everything in their lessons from scratch. While it can be stated that many teachers have to do so every year, in this school context the curriculum and materials are saved for each grade in folders or google drive folders and only need to be updated or edited based on the teachers' preferences. Teachers are given the option to create or adapt these or are welcomed to use as they are. (see Table 7)

Table 7

Creating, Imagining, and Innovating

Participant	Quote
Martha	*Trying to be creative trying to make it fun for the kids as well because some of them never even left their apartments for however long with the lockdowns*
Violet	*We had to plan all the lessons again on the zoom version, Google forms. Everything had to be transferred into a format, different format.*
Ayşe	*So, I think what we did like with my partner we just like talked about, we looked at our plan and we said how can we turn this into like an online lesson. So, most of the lessons we couldn't use. So, we had to make totally like new lessons*
Elif	*We prepared everything from scratch because it wasn't effective to display our old PDF files on the screen and just ask students to take notes on their printouts. We had to prepare digital and interactive materials to build an active and effective classroom environment*

Striving for Accuracy and Precision

While creating and implementing the lessons, the participants also indicated the HoM; striving for accuracy and precision. The associated intelligent behaviors are: striving to always do one's best, checking for ways to improve constantly, a desire for exactness, fidelity and craftmanship. Table 8 includes the participants' quotes.

Table 8

Striving for Accuracy and Precision

Participant	Quote
Martha	*Yeah lots and lots of extra planning like OK I know this is a strong student he's gonna finish this quickly So what else can he do it was lots of things in your back pocket like OK we have live worksheets and OK I can put him in her breakout room and they can discuss what we've been doing or he was just always thinking of extra things more things exciting things trying to be creative trying to make it fun for the kids as well.*
Violet	*Yes. Just looking back, yeah, there's just so much planning and organization mostly. I think. Details. But yeah, the ICT. I developed a lot. I'm still developing*
Ayşe	*First it felt like a really overwhelming because suddenly you're just in front of the computer and it was at the beginning. You feel like you are shy because of that because you're in front of the screen, all the parents are in the background, and you are there. Everyone is listening to you. So that was first a shock and a lot more pressure to not mess up.*
Elif	*So, we had to collect their work every day through the K12 system and download and check and give feedback, written feedback, correcting their mistakes. So, it took a lot of time too, but technologically we were able to do it*

Remaining Open to Continuous Learning

After reading the narratives and identifying the emerging challenges the teachers faced, it is quite effortless to understand that the teachers had to remain open to continuous learning. The associated intelligent behaviors are; continuously searching for new and better ways, resisting complacency, being eager to learn throughout lifetime, striving for improvement, growing, learning, modifying, and improving oneself. All participants spoke about attending webinars and using the department to share and give each other presentations and samples of resources they found. Table 9 presents quotes from the participants.

Table 9

Remaining Open to Continuous Learning

Participant	Quotes
Martha	*I attended lots of conferences and seminars specifically about teaching online and you know so we could share ideas again learning ideas sharing different things there were many things I heard about*

Participant	Quotes
Violet	*Everybody collaborated as a department, and we all work together, and we all shared our knowledge. Collaboration with all the teachers was very helpful and we shared our knowledge.*
Ayşe	*Teamwork and I like a personal goal let's say because for example like they had a really good team and then like everyone was sharing so we were sharing a lot, we were teaching a lot to each other*
Elif	*Before we start. Nobody taught anything. We just. Play them. Learn. Yeah. Played around with it. That's it. Yeah. We tried. Nobody said anything. Even the IT department here. Nobody taught anything. We figured it out together as a team. You found something shared with us, we found something shared with the others*

Thinking Interdependently

When identifying the intelligent behaviors for remaining open to continuous learning, it became apparent that the participants worked collaboratively to help each other learn new techniques and technologies. The associated intelligent behaviors for thinking interdependently are; being able to work with and learn from others and being sensitive to the needs of others. Table 9 shows quotes for remaining open to continuous learning, but they also display thinking interpedently. The teachers at the English department at this school used each other throughout to help each other. They gave presentations of new programs or techniques. They had meetings where each person was responsible to research and present a new technology and share their feedback or critiques on the usefulness or difficulties they encountered. Ayşe said, "*Teamwork and I have like a personal goal let's say because for example like we had a really good team and everyone was sharing*." This is the sentiment in most of the narratives concerning thinking interdependently. These teachers are a group that collaboratively helped each other throughout the COVID-19 pandemic.

Habits of Mind Unique to Each Participant

In this section the Habits of Mind that were distinct to each participant with extracts and the associated intelligent behaviors. Martha is examined first, followed by Violet, Ayşe and Elif.

Martha's Habits of Mind

In addition to the seven HoM all participants displayed, it was found that Martha had two distinct to her. She indicated her flexible thinking when she was creating new lessons. She had to consider alternative points of view when she tried to relate to the age and ability of her students and tried to find ways to make her lessons more enjoyable for her students. She also talked about how sometimes the mistakes made in the lessons created humorous situations. Allowing the students agency to create and share presentations or allowing them to be in charge of zoom as the 'teacher' for the lesson created unique situations that were amusing. This lines up with the intelligent behaviors for finding humor: finding the whimsical and unexpected, being able to laugh at situations and themselves. Martha always tried to have extra plans ready for students. Table 10 shows Martha's associated quotes.

Table 10

Martha's Habits of Mind

HoM	Quote
Thinking Flexibly	*So, I think yeah, we had to think differently I think outside of the box and we did we probably did more*
	Trying to be creative trying to make it fun for the kids as well because some of them never even left their apartments for however long with the lockdowns and everything so to try and make it fun to try and keep them enjoying English cause you know it's important, they're only primary school
Finding Humor	*It was kind of all about the lesson and not so much about the interaction with the kids and then when you get more relaxed with it you can joke around you can have a little bit of fun you know I used to let them be the teacher at some point say OK go ahead share your screen you know they would do the wrong presentations and they were better right than us where they were much more relaxed with using technology than I was that's 100% certain.*

Violet's Habits of Mind

In analyzing Violet's narratives there were two additional Habits of Mind indicated. Table 11 displays quotes from her narrative. She described how during lessons she needed to manage her impulsivity when technical errors happened. She had to stay calm and try to stay in control of situations that were out of her control. In these cases, she didn't have a long time to think before acting but she had to remain calm, thoughtful, and deliberate. She also found humor in the failures and unexpected situations during lessons.

Table 11

Violet's Habits of Mind

HoM	Quote
Managing Impulsivity	*During our Zoom experience every lesson we would have challenges with technical problems, the internet would fail, sign in problems, it was so important to stay calm and not give any problems or challenges away to our students and parents.*
Finding Humor	*Although I had to manage impulsivity also when something did go wrong which for everyone it did at some point being able to find humor and not be so serious all of the time. Sometimes the failures would make funny problems and the students would also laugh with us.*

Ayşe's Habits of Mind

Ayşe had an additional four HoM in her narratives. Table 12 displays her HoM and quotes. She indicates her flexible thinking in her planning of new lessons. She had to think unconventionally in order to integrate different ways to teach. She discussed how she had to create entire new activities or even change the topics to be able to reach her language goals. She also shared her reflective thinking when she had to made adaptions after an unsuccessful lesson and the next one proceeded smoother. This was important for when she would take responsible risks. These risks were apparent when she was trying new technologies or new ways to complete activities that were not easily transferred from face-to-face to virtual, but she needed

to find ways for these to be done in some form. She had to reflect and think about what went wrong, how she could improve it, and whether she should remove parts or aspects or not, to create a more effective lesson. During the risky lessons, or when she was having difficulties in the lesson, or when her students were home alone and there were technology problems, she describes how she had to remain calm and communicate with precision to not add further confusion to the situation and help the students.

Table 12

Ayşe's Habits of Mind

HoM	Quote
Thinking Flexibly	*We planned everything like from scratch because you have to do everything again, just that fits like the zoom environment that fits like all the activities*
Thinking About Thinking	*I can say that like it's usually your first research. You try it, you get your feedback. It's like a reflective thinking going on all the time how can I make this work?*
Thinking and Communicating with Clarity and Precision	*And then you had to be really passionate to really like to explain to them in a really calm way so that they don't get stressed and are able to figure out how to fix the problem sometimes this was hard if they were home alone and had no help.*
Taking Responsible Risks	*And of course, like there were things that I was looking for, but for example while I was looking for something on the Internet, I just found something. I tried this, it worked or sometimes it didn't work so we just adapted it or changed it or used something else.*

Elif's Habits of Mind

Like some of the other participants, Elif had to think flexibly when creating and adapting her lessons for ERT. In addition, she describes how her students all wanted turns to speak in each lesson and to share their feelings. She describes how she managed this request and how she was able to create ways for the students to get their turns. This is indicative of listening with understanding and empathy. The associated intelligent behavior is; gently attending to another person demonstrating an understanding of and empathy for an idea or feeling and making an effort to

perceive another's point of view and emotions. Table 13 provides her quotes and the identified HoM from her narrative.

Table 13

Elif's Habits of Mind

HoM	Quote
Listening with Understanding and Empathy	*All or most of the students wanted to have a turn to speak in a lesson but it was not applicable. Letting them turn on their microphones after counting 1,2,3 so that they could all answer questions together was a solution found after empathizing with them.*
Thinking Flexibly	*Letting them speak one by one was really hard. Whereas in class you would just see their fingers and let people speak in quickly, but here on technology they own zoom. They had to be comfortable with that too, but it was not that easy. They were so small, second graders. And it was their first time on the computer, too. So, if everything was so slow, everything took much longer*

Educational Theories Associated with Identified Habits of Mind

Once the intelligent behaviors were linked to the associated HoM the conceptual framework created by Altan et al. (2019) was used to create a link between educational theories and the HoM. This link between Habits of Mind and certain learning theories can be made by identifying the intelligent behaviors which are common to both. Out of the 16 HoM, the researcher identified 14 from the four narratives, but seven were common across all participants. Table 14 exhibits the seven HoM and the associated intelligent behaviors that were extracted from the narratives in this research. According Altan et al. (2019) the intelligent behaviors identified in this study can be correlated to one or more than one educational theory discussed in chapter 2.

Table 14

Habit of Mind and the Associated Learning Theory

HoM	Intelligent Behaviors	Learning Theory
Applying Past Knowledge to New Situations	Accessing prior knowledge and work to transfer knowledge beyond the situation in which it was learned	C SRL

HoM	Intelligent Behaviors	Learning Theory
	Calling upon one's store of knowledge and experience as sources of data to solve each new challenge	C SRL
	Abstracting meaning from one experience, carrying it forth, and applying it in a novel situation	C SRL
Striving for Accuracy and Precision	Striving to always do one's best	IT
	Checking for ways to improve constantly	IT
Persisting	Persevering in task through to completion; remaining focused even when stuck	IT SRL
	Not giving up easily	IT SRL
	Being comfortable with ambiguous situations	C EI
Questioning and Problem Posing	Developing questioning strategies to produce data	C SRL
	Asking questions that make causal connections and relationships	C SRL
Creating, Imagining, Innovating	Conceiving problem solutions differently, examining alternative possibilities from many angles	C SRL
Thinking Interdependently	Being able to work with and learn from others	EI C
Remaining Open to Continuous Learning	Continuously searching for new and better ways, resisting complacency	IT
	Being eager to learn throughout lifetime	IT
	Striving for improvement, growing, learning, modifying, and improving oneself	IT

Note. Adapted from Altan et al. (2019)
C= Constructivism, It= Incremental Theory, SRL = Self-Regulated Learning, M = Mindfulness, EI = Emotional Intelligence

In addition to the framework from Altan et al. (2019), the researcher found three additional intelligent behaviors associated with two of the Habits of Mind. The researcher suggests that these intelligent behaviors be added to the framework. Table 15 presents the intelligent behavior and the suggested alignment with the educational theories.

Table 15

Additional Intelligent Behaviors and Associated Educational Theories

HoM	Intelligent Behaviors	Learning Theory
Striving for Accuracy and Precision	Desire for exactness, fidelity and craftmanship	IT
Creating, Imagining, Innovating	Generating new and novel ideas, fluency, and originality	C SRL
	Try a different way	C SRL

Note. C= Constructivism, It= Incremental Theory, SRL = Self-Regulated Learning, M = Mindfulness, EI = Emotional Intelligence

CHAPTER 5: DISCUSSION

Introduction

This chapter presents a brief overview of the study and the research questions that guided the research. The researcher discusses the major findings from the study, including the teachers' observed HoM and how these HoM were linked to associated educational theories based on the Altan et al. (2019) framework. The discussion is followed by implications for practice and for research.

Overview of the Study

This study aimed to explore how teachers at the chosen school explained how they overcame the challenges faced during ERT during the COVID-19 pandemic. A key outcome of this study was to align their explanations with intelligent behaviors that indicated certain HoM. The questions which guided this study are;

1. What are the challenges primary teachers were faced with when adopting new technologies into their educational practices during the emergency remote teaching?
2. What intelligent behaviors can be identified from teachers' explaining how they managed their emergency remote teaching during the COVID 19 pandemic?
    a. Which Habits of Mind are evident from these intelligent behaviors?
    b. Which educational theories can be used to explain teachers' Habits of Mind?

The study used narrative inquiry and semi structured interviews. The first interview used guiding questions (Appendix A) to help the participants explain the challenges they have faced. The second interview was a member check where the

participants were given a chart of the 16 HoM with their associated intelligent behaviors and a list of the HoM that were identified from their initial interview. The participants were asked to confirm the reconstruction of their narratives and the HoM which were identified. At this time, they were given the opportunity to clarify and expand their previous answers in order to complete co-constructing their narratives.

The school chosen for this study was a nonprofit foundation primary school. The school uses the PYP framework concurrently with the national curriculum defined by MoNE. The four participants were purposefully chosen based on, their work at this school during the COVID-19 pandemic. There were two native and two non-native English teachers. The participants were all experienced English teachers with a minimum of 10 years teaching experience.

Discussion of Major Findings

This was a retrospective narrative study and most of the participants were able to describe overcoming the challenges and eventually creating new habits and becoming more comfortable with using technology. In the beginning there was emotional turmoil and chaos. Throughout the pandemic, they faced the challenge of what this study calls spatial differences, meaning teaching in different spaces: face-to-face versus virtual classrooms. The challenges of technology were different for each participant with regards to the level of difficulty they faced, but all the participants were able to find new and innovative ways to overcome these challenges and to teach effectively.

Habits of Mind and Associated Educational Theories

This study found that the following seven HoM were exhibited by all participants: applying past knowledge to new situations; striving for accuracy and precision; persisting; questioning and problem posing; creating, imagining,

innovating; thinking interdependently; and remaining open to continuous learning. Seven of the other HoM were attributed to at least one of the participants. Of the 16 Habits, therefore, only two were not found to be demonstrated by any of the participants: gathering data through all senses and responding with wonderment and awe. This could be due to two reasons. As stated earlier, Burant et al. (2007) warns that some intelligent behaviors are not observable and context, culture and personality traits need to be taken into account. Additionally, the context of this study did not lend itself to physical senses and the circumstances of the pandemic did not lend itself to wonderment and awe.

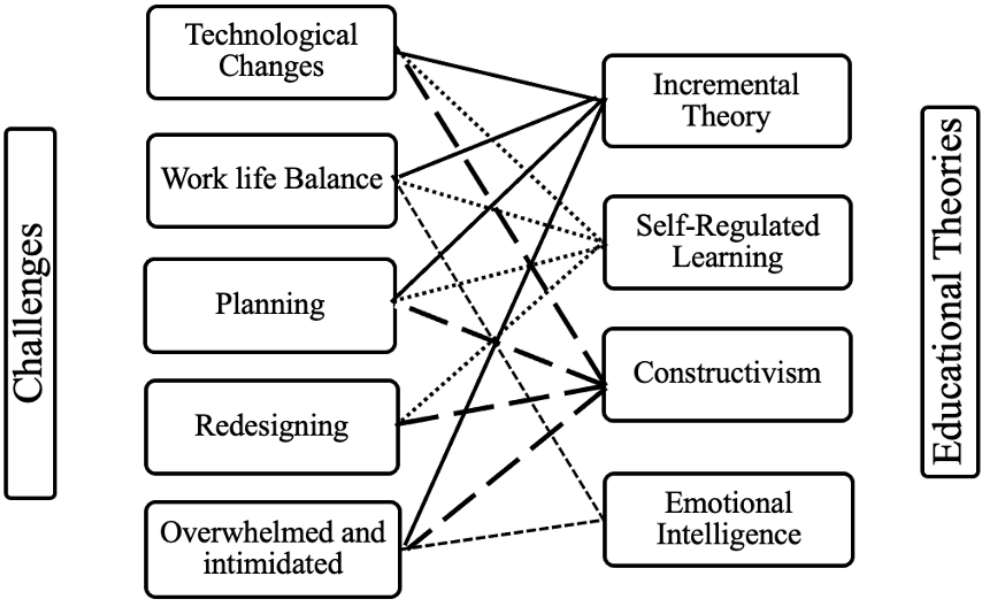
Using Altan et al. (2019) theoretical framework we can link these to four learning theories; constructivism, incremental theory, self-regulated learning, and emotional intelligence (see Table 14) to the different HoM the participants used when faced with the challenges during ERT. In the following paragraphs, findings related to the main seven HoM identified in the study's participants are discussed further. Within this discussion, the study's framework is used to associate the HoM with educational theories.

Persisting

Regarding the HoM persisting, the participants were found to display the following intelligent behaviors; persevering in task through to completion; remaining focused even when stuck and being comfortable with ambiguous situations. In terms of the educational theories, Altan et al. (2019) aligned these specific intelligent behaviors with self-regulated learning, constructivism, incremental theory, and emotional intelligence. Figure 2 depicts the relationships between the challenges and the educational theories associated with the observed intelligent behaviors.

Figure 2

Persisting: Challenges and Educational Theories



Note. Lines show relationships between the challenges and the different educational theory.

Self-regulated behaviors could be discerned when participants were describing how they maintained a work/home life balance. Maintaining this balance was a struggle in part due to the lesson planning being very time-consuming (Iivari et al., 2020). In regard to the challenge of balancing work and home life , Ayşe and Martha describe how much time planning took and Martha specifically commented on being in front of the computer from the time she woke up until late at night. Additionally, Ayşe, Martha and Elif describe the time-consuming nature of giving digital feedback to the students. Furthermore, self-regulated learning theory was identified in the participants diligence, and resourcefulness (Zimmerman, 1990). The initial challenges the participants described appear to stem from transitions in their ICT requirements. Teachers who had experience and who were more comfortable with ICT pre-COVID found the transition to ERT smoother (Al-khresheh, 2022;

Atmojo & Nugroho, 2020). Of the four participants, Violet and Martha both describe having basic digital competence, and mention using PowerPoint and YouTube in their classes as well as email and Microsoft Office capabilities. In comparison, Elif and Ayşe describe a higher level of comfort and a broader ICT repertoire. While Elif cited various teleconferencing uses previously used and a personal interest in using ICT, Ayşe described a passion to creating with and integrating ICT in her lessons.

Teachers incorporated new ways of giving digital feedback, which supports aspects of incremental learning theory and constructivism. As Putri et al. (2020) found, giving feedback in primary school took much longer for the teachers, but on the positive side this resulted in teachers creating more individualized feedback for each student. Another issue regarding the feedback giving process was the time it took compared to previously. While checking the students' work, giving feedback was much more time consuming digitally than using a pen or giving verbal feedback immediately in class. Martha, Elif and Ayşe cite this as a major challenge and extremely time consuming.

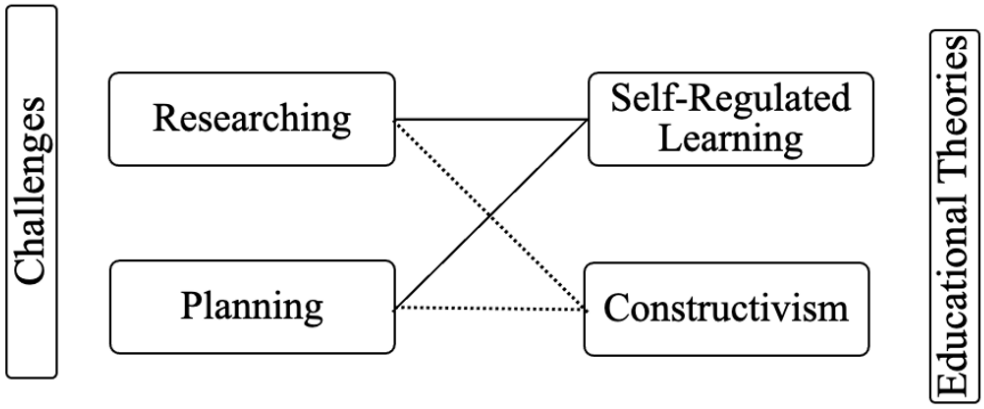
Teachers' emotional intelligence was challenged too, when they felt overwhelmed and intimidated by new the demands brought upon by ERT. Goleman's (1995) defines emotional intelligence to include characteristics of persistence, empathy, and impulse control. In line with the aforementioned research, Martha and Violet felt more overwhelmed and stressed at the beginning of the switch to ERT. Martha described how hard it was just to open ZOOM and how she needed to practice with her peers to learn how to manage the classroom until she became comfortable enough that it became second nature to use ZOOM.

Questioning and Problem Posing

Concerning the HoM questioning and problem posing, the participants were found to display the following intelligent behaviors; developing questioning strategies to produce data, asking questions that make causal connections and relationships. Altan et al. (2019) also aligned these specific intelligent behaviors with constructivism and self-regulated learning. The relationships between the educational theories and the challenges the teachers faced are depicted in Figure 3.

Figure 3

Questioning and Problem Solving: Challenges and Educational Theories



Note. Lines show relationships between the challenges and the different educational theory.

All the participants cited questioning themselves regarding the different aspects of how they can proceed in the new environment. Elif detailed the many questions she asked herself before beginning the switch to ERT. Ayşe and Violet asked themselves questions when researching new ICT programs, in order to integrate the tool in such a way that accounts for content, objectives, and ability. Martha and Ayşe used these questioning strategies and reflection after lessons. This reflection process is indicative of constructivism where learning is constructed through action and problem-based learning (Yilmaz, 2008). Furthermore, self-

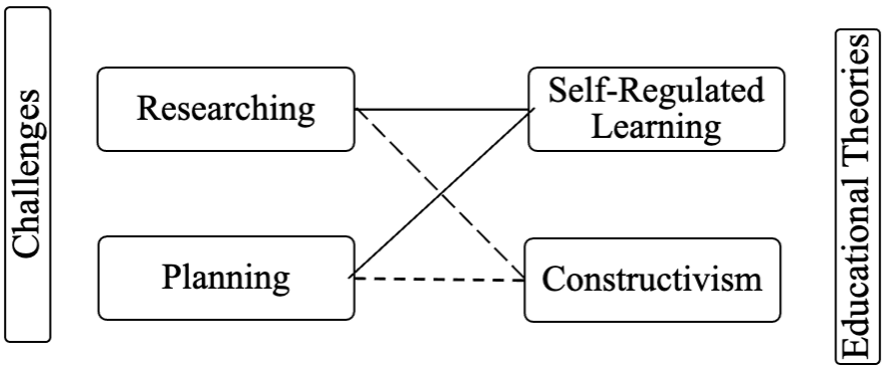
regulated learning can be identified in their diligence and in how they understood their current skill set and sought out resources to improve their lessons, as exemplified in the self-questioning practices mentioned above.

Interrelated Habits of Mind: Applying Past Knowledge to New Situations; Creating, Imagining, Innovating; Striving for Accuracy and Precision

As previously stated in the results, the researcher found that three Habits of Mind worked together and sequentially in this study. The first HoM in the grouping is applying past knowledge to new situations and the participants were found to display the following intelligent behaviors; accessing prior knowledge and work to transfer knowledge beyond the situation in which it was learned, calling upon one's store of knowledge and experience as sources of data to solve each challenge, abstracting meaning from one experience, carrying it forth, and applying it in a novel situation. The key educational theories associated with these behaviors are constructivism and self-regulated learning. Figure 4 shows the relationships between the challenges and educational theories observed.

Figure 4

Applying Past Knowledge to New Situations: Challenges and Educational Theories

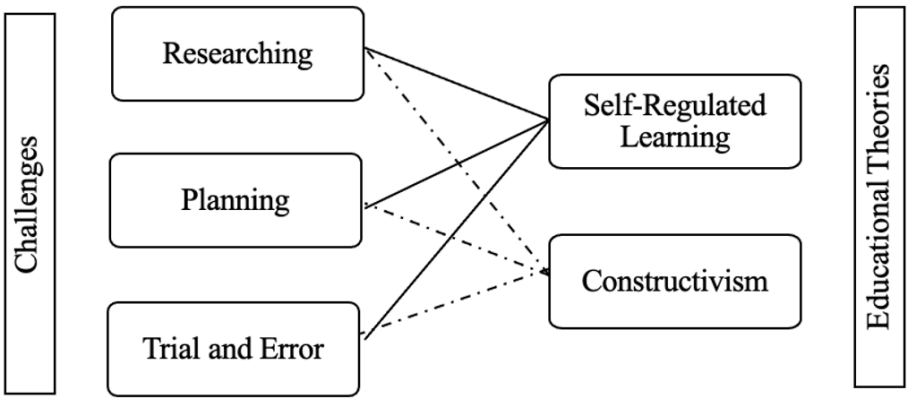


Note. Lines show relationships between the challenges and the different educational theory.

The planning and adaptation the participants conducted during ERT required them to apply past knowledge to new situations and at times simultaneously or immediately after the participants displayed with creating, imagining, innovating. The participants were found to display the following intelligent behaviors: conceiving problem solutions differently, examining alternative possibilities from many angles; generating new and novel ideas, fluency, and originality; try a different way. As with the previous HoM, the educational theory of constructivism can be used to explain the behaviors. There are also indications of self-regulated learning theory as participants reported monitoring and adjusting their actions. Figure 5 illustrates the relationships between the challenges and the associated educational theories.

Figure 5

Creating, Imagining, and Innovating: Challenges and Educational Theories



Note. Lines show relationships between the challenges and the different educational theory.

In general, the participants exhibited several intelligent behaviors when they realized they had to redesign their material and lessons to adapt to ERT. Most claimed that they redesigned everything from lesson plans to materials in order to

make them suitable for ERT. This process necessitated the need to research different technologies and adapt them to their lessons, which led to higher creativity and innovation in their lesson planning. This is in opposition of the findings of Iivari et al. (2020) who found that while teachers in Finland and India reported planning lessons taking twice as long, their participants did not indicate a willingness to innovate and use creativity to create new lessons integrating available technologies. The findings of Iivari et al.(2020) are unfortunate as the quality of learning has been found to be affected by a teacher's creativity due to the teacher being able to identify and execute a successful learning technique and approach. (Al-khresheh, 2022; Beghetto, 2019; Katz-Buonincontro & Anderson, 2020).

Another reason for the difference in findings can be explained by other studies that indicate English language teachers are more creative than other subject teachers (Ghonsooly & Showqi, 2012) and the findings for Iivari et al. (2020) was for class teachers. The views of English teachers' creativity is supported by the current study's findings regarding self-regulated learning and constructivism. The lesson planning took additional time and there was innovation and creativity in the way they integrated and adapted available technologies into the daily English lessons.

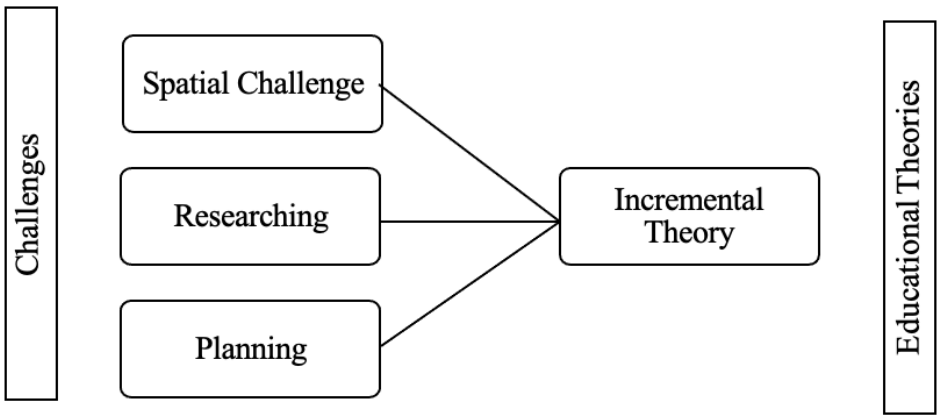
Both self-regulated learning and constructivism were apparent when the teachers discussed how the new integrations required trial and error as well as adjustments in order to reach the teachers' lesson goals and objectives. Furthermore, they were surprised when they indicated that overall, their students were successful in learning English during this period. In fact, Martha, Ayşe and Elif mentioned speaking, listening and vocabulary being remarkably successful in comparison to face-to-face. The participants' perception of the students' success was in line with

the findings of a systematic literature review of studies published in CALL and MALL publications, which found that ICT integration showed significant success in vocabulary, listening, speaking and overall language proficiency (Irudayasamy et al., 2021).

The third interrelated HoM is stiving for accuracy and precision. This HoM was recognized because before, during and after ERT the participants were continuously working their hardest to achieve accuracy and precision in their actions and lessons. Accordingly, the participants were observed to display the following intelligent behaviors; striving to always do one's best, checking for ways to improve constantly, and desire for exactness, fidelity and craftmanship. Altan et al. (2019) aligned these with incremental theory which is grounded in Dweck's (2006) growth mindset (Figure 6).

Figure 6

Striving for Accuracy and Precision: Challenges and Educational Theories



In this study, the teachers were working hard to improve themselves and the students' experience. An illustration can be found when Elif and Violet, both realized it was important to use the ZOOM platform to allow students to speak and share their emotions and create connections to their peers. They realized they needed to take

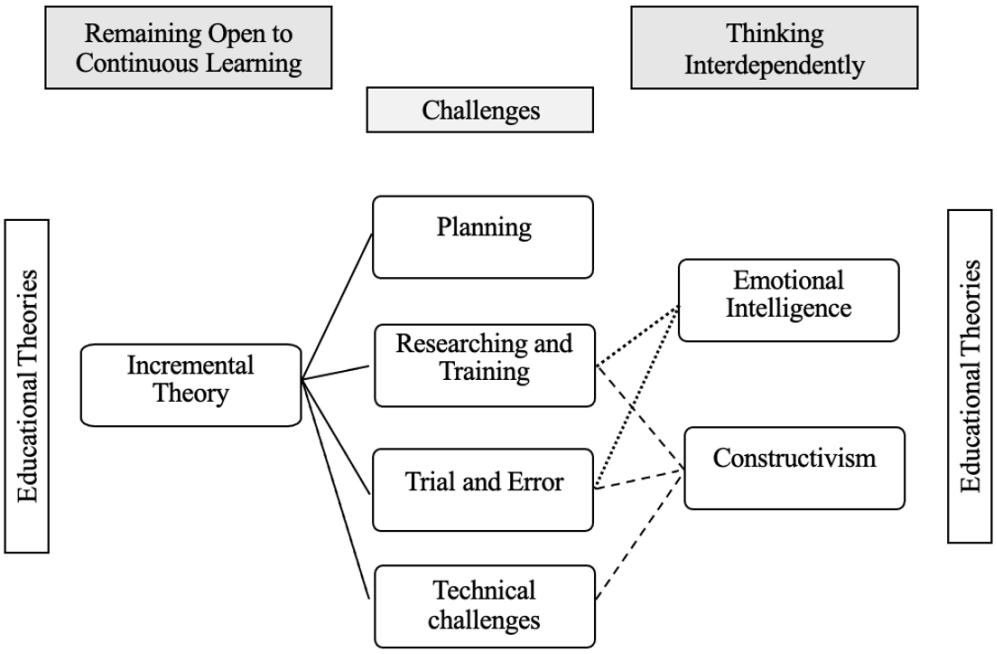
extra steps to create an environment where students could express themselves with each other and not feel alone. Research such as Haleemunnissa et al. (2021) point out that teachers of young children usually support students emotionally with hugs and pats on the back; this contact was of course impossible when teaching remotely. For example, Martha described how in the beginning it was hard for her to create a rapport with the students because the teacher lost the ability to use the small interactions throughout the day, like commenting on shoes or the pat on the shoulder when giving praise. She states she was able to eventually form the rapport, but it took more time and she had to change strategies and use her view into their environment to create it. It was evident from the in-depth narratives of the participants that they all saw the needs of the students and worked to achieve camaraderie with their students; all of the teachers indicated that it would be possible to find ways to connect with their students even in this unique learning space. Their unrestrictive expectations and continual effort to improve themselves exemplifies the tenets of incremental theory.

Remaining Open to Continuous Learning and Thinking Interdependently

While remaining open to continuous learning and thinking interdependently have different intelligent behaviors, they worked in conjunction with each other in this study. The relationship between the two HoM, challenges and the associated educational theories are shown in Figure 7.

Figure 7

Remaining Open to Continuous Learning and Thinking Interdependently: Challenges and Educational Theories



Note. Lines show relationships between the challenges and the different educational theory.

Participants who remained open to continuous learning were found to display the following intelligent behaviors; continuously searching for new and better ways, resisting complacency, being eager to learn throughout lifetime and striving for improvement, growing, learning, modifying, and improving oneself. As with other HoM, these behaviors are in line with incremental theory.

The participants conducted extensive research to adjust their lessons to a virtual platform. They were also striving to improve themselves, as all four participants indicated they attended webinars and independently sought information and ways to improve themselves and their teaching.

As the participants gained new knowledge, they appreciated the importance of learning from each other; to be interdependent, which is a related HoM in this

study. Within this HoM the participants were found to display the following intelligent behaviors: being able to work with and learn from others. The participants' building and support of their knowledge is in line with constructivism. Violet, for example, described how it was nice to see how others were using certain ICTs and ask specifics to help discover their usefulness to her grade level. As they learned to trust and rely on their colleagues, it became clear their emotional intelligence was also being developed. Martha and Ayşe describe how sharing experiences concerning Google Forms, helped relieve the stress they felt about giving homework. When they could see what could be done and how to optimize the use, it took away their need to experiment and was "*one less worry*".

Implications for Practice

This research heavily relied on the previous research of Altan et al. (2019) and their theoretical framework grounding Costa and Kallick's 16 Habits of Mind in educational theory. The findings from this research re-enforce the theoretical framework from Altan et al. (2019) in terms of the educational theories connection to the 16 HoM.

The findings from this study showed that many of the HoM did not work in isolation and some of the participants' extracts had more than one associated intelligent behavior. During the examination of the findings above, the researcher organized the results linearly in order to reduce the repetitiveness. One distinction that became evident to the researcher is that while the teachers exhibited the educational theories, they also described lessons which were teaching aspects of these theories to the students.

The findings from this study show that the participants used constructivism throughout their ERT journey. The teachers built their knowledge and learned by

doing and consequently, the students learned constructively. The ERT classroom was cited to be more effective in a student-centered approach which is also a constructivist approach (Duraku, 2021) additionally, pre-COVID constructivist methodology was cited as being more successful in the integration of ICT (Pittman & Gaines, 2015). The participants felt that overall, they had successful language learning throughout ERT, and their students were able to meet or exceed their learning outcomes during this time. Their classroom descriptions all exhibited constructivism and a student-centered approach, which could be attributed to the PYP curriculum which emphasizes learning by doing and inquiry-based teaching.

Additionally, self-regulated learning was evident in how the participants managed themselves, in some instances they were teaching their students to be self-regulated learners. In the research for primary school aged children this is important because it has been found that this age lacks this capability (Munastiwi et al., 2023; Žižanović et al., 2021). This training is important for children because during ERT it was found that overall Türkiye underestimated their young adult learners' capability in their self-regulation of learning (Bozkurt et al., 2020). Furthermore, they recommend higher education teachers need to help teach this skill to young adults, but our participants were able to identify this need in their young learners and support them. This difference could be from the fact that primary teachers are always guiding and teaching their pupils responsibilities and independence.

The participants displayed emotional intelligence in themselves and in guiding their students through the traumatic time. Incremental theory was visible in their need to improve themselves and their lessons for the students. Some descriptions of the teachers' challenges demonstrated how they helped the students develop a growth mindset and to understand the overwhelming emotions they were

experiencing were shared. This is a predominate premise from Dweck's (2006) incremental theory; teachers can have a large impact on young learners' and in the development of their mindset, either fostering a growth mindset (incremental) or precipitating a fixed mindset (entity).

The findings from this study show that these English teachers at this school were able to manage and face the challenge of ERT during the COVID-19 pandemic, but they did not have training for the skills they implemented. While it is apparent no one was prepared for the pandemic —the institutions, the public sector, the parents, the teachers or the students (Hodges et al., 2020; Hu et al., 2021; Trust & Whalen, 2020) —there have been localized emergencies which have necessitated school closures and remote teaching before now. COVID-19's uniqueness is that it was globally widespread and the longevity of the emergency responses it required. Education during this time had the goal of giving temporary access to education during the crisis and not redesigning how education should be available. Despite this, we can learn from this experience and be better prepared for the future. In the future, educational institutions and countries' governments should have clear plans in place. These plans should not be an emergency plan the institution keeps in a folder to be used when the emergency happens, the plan should be clearly defined to all stakeholders and training be routinely given. With regards to teachers and education, the tools need to be defined, trained in, modeled and used. For example, if ZOOM is the platform assigned, teachers need to be given opportunities to operate and be the host to lead meetings or seminars. In this way, a future emergency will not create such turmoil and unnecessary stress in otherwise traumatic times. Just like earthquake and fire drills are practiced, remote teaching skills should be practiced by the teachers well.

Collectively, the findings from this research indicate a need for teacher education to be examined. Pre-service training which only teaches methodologies as an examination of the tenets and the history of the theory, do not give appropriate context and training to future teachers. In terms of the teachers' learning about the educational theories and methodologies, perspective teachers need to see the methodology in action, they need to be active players in how it is applied, and they need to be given the opportunity to produce this. Particularly, constructivism should have extra care given considering the findings from this research. Collectively, constructivism was a running theme through literature and the participants narratives; student-centered, ICT integration, the intelligent behaviors alignment. Giving importance to this theory being important and useful in the classroom, it should therefore be similarly a focus in the education of teachers. This is similar to incremental theory, emotional intelligence as well as dispositions. Diez (2007) finds that dispositions are coachable and not fixed and teachers can be taught not only in themselves but how to teach their students these dispositions. Essentially, these important mental and emotional skills require certain specific methods to teach in the classroom, but currently this is not addressed in teacher education.

While digitization is an ongoing goal in the educational system globally, there is an overwhelming amount of research which has differing and conflicting causes for the success or failure of integrating technology in the classroom. Most advocated for, is formal teacher education revision as a response. Many researchers cite that pre-service programs which seamlessly integrate and teach ICT in their programs can help teachers have more confidence in using it in their classrooms. Furthermore, the findings from this study are in line with many studies which encourage an expansion of pre-service teacher education integrating, modeling and

allowing practical training into the education programs. Pre-service teacher programs should seamlessly integrate and teach ICT in their programs, which can help teachers have more confidence in using it in their classrooms.

As COVID-19 has passed and schools are back to their normal schedule without restrictions. It was encouraging that the teachers indicated many of the changes they made throughout ERT are still being used in their face-to-face classroom now. This includes digital tools, different ways of interacting with the content as well as homework and feedback practices.

Implications for Further Research

The findings from this research adds to both the ERT research and the Habits of Mind research. As this study took place at a PYP school, there appears to be considerable crossover in terms of the PYP's attitudes and Costa and Kallick's HoM. Thus, further research could be carried out to discover the links between PYP attitudes and the 16 HoM. This link can also be made with the associated learning theories similar to the Altan et al. (2019) framework. Additionally, how the students exemplify these behaviors in their respective programs can be examined for their similarities.

A longitudinal experimental study following a cohort of pre-service teachers given an expanded methodology training and dispositional coaching could be implemented, and such a study could give data on how successful a course as mentioned could be on the teachers' teaching practices.

As COVID-19 pandemic is mostly concluded and schools have returned to regular academic schedule, teachers' ICT integration could be further examined. A question would be whether or not the skills and technologies used during ERT influence their classrooms after ERT, which was the case for the participants in this

study, but for results with higher reliability, such a study could be conducted. An additional question could be on whether their TPACK skills have improved or not. Overall, questions regarding COVID-19 ERT's impact on the way teachers are conducting lessons post-pandemic could be examined further.

Limitations

This study is an examination from one private school in Türkiye and their teachers' individual experiences. These stories are unique to their situation and may be different from other schools or other individuals' experiences. Additionally, the researcher works in this department and offered support to the teachers in their technology use during the ERT period. Therefore, there is a limit to the generalizability of the results from this study.

In the narrative inquiry research model, there can be the risk of the researcher transposing their own perspective on the participants stories. To limit this there was member checks where the participants looked at the analysis and agreed or expanded on meanings or misconceptions.

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Appendix A

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T.C.
ANKARA VALİLİĞİ
Milli Eğitim Müdürlüğü

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BİLKENT ÜNİVERSİTESİNE
(Eğitim Bilimleri Enstitüsü)

İlgi : a)MEB Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 2020/2 nolu Genelgesi.
b)31.01.2022 tarihli ve 1168 sayılı yazınız.

Üniversiteniz Eğitim Bilimleri Enstitüsü, Eğitim Programları ve Öğretim Yüksek Lisans Programı öğrencisi Amber LEE TÜYSÜZOĞLU'nun **"İlkokul İngilizce Öğretmenlerinin Acil Uzaktan Eğitim Sürecindeki Teknoloji Kullanımlarında Zihin Alışkanlıkları: Anlatı Araştırmasından İçgörüler"** konulu çalışması kapsamında İlimiz 25 ilçesindeki İlkokullarda, uygulama talebi ilgi (a) Genelge çerçevesinde incelenmiştir.

Yapılan inceleme sonucunda, söz konusu araştırmanın Müdürlüğümüzde muhafaza edilen ölçme araçlarının; Türkiye Cumhuriyeti Anayasası, Milli Eğitim Temel Kanunu ile Türk Milli Eğitiminin genel amaçlarına uygun olarak, ilgili yasal düzenlemelerde belirtilen ilke, esas ve amaçlara aykırılık teşkil etmeyecek, eğitim-öğretim faaliyetlerini aksatmayacak şekilde okul ve kurum yöneticilerinin sorumluluğunda gönüllülük esasına göre uygulanması Müdürlüğümüzce uygun görülmüştür.

Bilgilerinizi ve gereğini rica ederim.

Harun FATSA
Vali a.
Milli Eğitim Müdürü

Dağıtım:
Gereği: Bilkent Üniversitesi
Bilgi: 25 İlçe MEM

Appendix B

Official Permission from Bilkent University Ethics Committee

Bilkent Üniversitesi
Akademik İşler Rektör Yardımcılığı

Tarih : 18 Ocak 2022

Gönderilen : Amber Tüysüzoğlu

Tez Danışmanı : Jennie Farber Lane

Gönderen : H. Altay Güvenir
İnsan Araştırmaları Etik Kurulu Başkanı

Konu : *"Using Narrative ..."* çalışması etik kurul o

Üniversitemiz İnsan Araştırmaları Etik Kurulu, 18 Ocak 2022 tarihli görüşme sonucu, *"Using Narrative Inquiry To Gain Insights Into The Habits Of Mind Of Primary English Teachers' Implementing Technology During Emergency Remote Teaching"* isimli çalışmanız kapsamında yapmayı önerdiğiniz etkinlik için etik onay vermiş bulunmaktadır. Onay, ekte verilmiş olan çalışma önerisi, çalışma yürütücüleri ve bilgilendirme formu için geçerlidir.

Bu onay, yapmayı önerdiğiniz çalışmanın genel bilim etiği açısından bir değerlendirmedir. Çalışmanızda, kurulumuzun değerlendirmesi dışında kalabilen özel etik ve yasal sınırlamalara uymakla ayrıca yükümlüsünüz.

Kovid-19 salgını nedeniyle konulmuş olan kısıtlamaların yürürlükte olduğu süre içinde, tüm komite toplantıları elektronik ortamda yapılmaktadır; aşağıda isimleri bulunan Bilkent Üniversitesi Etik Kurulu Üyeleri adına bu yazıyı imzalama yetkisi kurul başkanındadır.

Etik Kurul Üyeleri:

Ünvan / İsim	**Bölüm / Uzmanlık**	
Prof.Dr. H. Altay Güvenir	Bilgisayar Mühendisliği	Başkan
Prof.Dr. Erdal Onar	Hukuk	Üye
Prof.Dr. Haldun Özaktaş	Elektrik ve Elektronik Müh.	Üye
Doç.Dr. Işık Yuluğ	Moleküler Biyoloji ve Genetik	Üye
Dr. Öğr. Üyesi Burcu Ayşen Ürgen	Psikoloji	Üye
Doç.Dr. Çiğdem Gündüz Demir	Bilgisayar Mühendisliği	Yedek Üye
Dr. Öğr. Üyesi A.Barış Özbilen	Hukuk	Yedek Üye

Kurul karar/toplantı No: 2022_01_18_01

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Appendix C

Participant Consent Form

Sayın Katılımcımız

Katılacağınız bu çalışma, "İlkokul İngilizce Öğretmenlerinin Acil Uzaktan Eğitim Sürecindeki Teknoloji Kullanımlarında Zihin Alışkanlıkları: Anlatı Araştırmasından İçgörüler" adıyla, Amber Lee Tüysüzoğlu tarafından Şubat 2022 ile Haziran 2022 sonu arasında yapılacak bir araştırma uygulamasıdır.

Araştırmanın Hedefi: Bu çalışma ilkokul İngilizce öğretmenlerinin acil uzaktan eğitim gereksiniminin teknolojik zorluklarına nasıl uyum sağladıklarını ve süreci nasıl yönettiklerini araştırmayı planlamaktadır.

Araştırmanın Nedeni: Tez çalışması

Araştırmanın Yapılacağı Yer(ler): Özel İhsan Doğramacı Vakfı İlkokulu

Araştırma Uygulaması: Görüşme

Araştırma T.C. Millî Eğitim Bakanlığı'nın ve okul/kurum yönetiminin izni ile gerçekleşmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çalışmada sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacı tarafından değerlendirilecektir. Veriler sadece araştırmada kullanılacak ve üçüncü kişilerle paylaşılmayacaktır.

Uygulamalar, kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden rahatsız hissederseniz cevaplama işini yarıda bırakabilirsiniz.

Katılımı onaylamadan önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Çalışma bittikten sonra araştırmacıya telefon veya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Saygılarımla,

Araştırmacı : Amber Lee Tüysüzoğlu
İletişim Bilgileri : [redacted]

Yukarıda bilgileri bulunan araştırmaya katılmayı kabul ediyorum.

…./…../……
İsim-

Soyisim İmza:
Katılımcı Adı-Soyadı :
Telefon Numarası :

Appendix D

Interview Questions

1. Please tell me about your remote teaching experience. What were the successes you had and what were the challenges you faced during emergency remote teaching?
2. Can you tell me about your background in terms of technology professional development?
3. Please describe some of the strategies, or teaching methods, you used during emergency remote teaching.

   Follow up question: How effective were these strategies, or teaching methods, you used during emergency remote teaching?

   - Were any of these strategies taught to you during your professional development ...?
4. Please describe what you were thinking -- your thought processes -- when you were identifying or developing these strategies.

   Follow up statement: Please discuss what you were thinking -- your thought processes -- when you were addressing any challenges.