COLLEGE-LEVEL FOREIGN LANGUAGE INSTRUCTOR'S PERCEPTIONS ON THE INCORPORATION OF MOBILE TECHNOLOGY DEVICES AND THEIR LEARNING APPLICATIONS IN CURRICULA: A COLLECTIVE CASE STUDY

by

Bellisa Reichelt

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy in Education

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Abstract

The purpose of this case study was to understand the integration of mobile technology devices (MTDs) and their learning applications (apps) into foreign-language curricula by foreign-language instructors at two colleges in the Mid-Atlantic region of the U.S. The theory guiding this study was Bandura's self-efficacy theory, which examined how self-efficacy affects college-level foreign language instructors' integration of MTDs and their learning apps into foreign language curricula. In this project qualitative case study design was used to explore and investigate the issue of having limited technology knowledge and skills to integrate MTDs and their learning apps into foreign language classes. A critical question that this study attempted to answer was how mobile educational technology training improved the way college-level foreign-language teachers delivered effective foreign-language curricula in the classroom. The study took place in two colleges in the Mid-Atlantic region of the U.S. A total of 10 college-level foreign-language instructors from these two colleges were the study participants. Additionally, the research instruments used throughout the study include journal prompts, foreign-language class syllabi, structured interviews, and transcripts from the interviews. Lastly, the researcher applied hand coding to complete an inductive and deductive coding process, including transcribing, categorizing, and analyzing the data collected from the participants. Five themes and fifteen sub-themes emerged from the study, underscoring the positive views of foreign language instructors on integrating MTDs and their learning apps. Yet, obstacles such as lack of training and connectivity issues challenge their full potential to enhance students' self-efficacy in reading, speaking, and listening.

Keywords: mobile technology devices, foreign language learning applications, self-efficacy, perceptions of foreign language instructors, instructional technology integration

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Dedication

I express my sincere commitment to the educational institutions, educators, and students who may derive significance from the discoveries of this research investigation. The author expresses a genuine aspiration that the knowledge acquired from this research can function as a reservoir of motivation and direction, bolstering individuals' personal, academic, and professional development. May this dissertation serve as a valuable source of knowledge and a reference point for individuals aiming to improve their teaching methodologies, broaden their educational perspectives, and cultivate a culture of ongoing professional development?

This work is dedicated to devoted instructors whose steadfast commitment to molding one's intellect is a monument to their ardor and devotion. The unwavering dedication in fostering and directing kids on their academic path warrants acknowledgment and esteem. With the ultimate goal of improving educational practices and making learning for students more meaningful and engaging, this research study intends to offer fresh perspectives and cutting-edge methods. The students, whose thirst for knowledge and dedication to upholding high academic standards serve as a constant source of inspiration for me, have my earnest commitment. This study was conducted to assist readers in their educational endeavors and advance their personal and professional lives. The ideas and recommendations presented in this dissertation are intended to serve as a source of empowerment, stimulating intellectual curiosity and nurturing ambitious dreams.

In summary, this dedication is an homage to the educational community, including educational institutions, educators, and students. This research study aims to provide support, inspiration, and a vital reference for individuals who are interested in making a positive effect in the field of education and contributing to the growth and development of future generations.

Acknowledgments

With a heart full of gratitude, I first and foremost bow to God's grace. It has been the guiding light through life's labyrinth, steering me to this pivotal moment of my dissertation's fruition.

The tapestry of my journey is intricately woven with threads from two monumental pillars. My mother, Nina, stands as the embodiment of knowledge and legacy. Your role as a revered Thai language teacher and principal at the Thai government elementary school etched deep lessons within me. Every word you spoke, every cultural nuance you shared, fortified my spirit and directed my path with purpose and grace.

In the quiet chambers of my heart, resonates the loving voice of my late father. His life, marked by honor and love from his military days, held a dream for me — to witness his child's academic pinnacle. Today, even in his absence, I feel the caress of his pride and warmth. Dad, this milestone is our shared dream realized. This Ph.D. is more than just a testament; it is an eternal bond that intertwines our hopes and aspirations. Beside me, grounding my journey, has been Robert Reichelt, my beloved husband. His love and steadfast belief in me fortified my resolve. With mom's teachings, dad's cherished memory, and Robert's hand clasping mine, I feel emboldened, ready not merely to face, but to sculpt the world.

To Dr. Park, Dr. Ozolnieks, and Dr. Cates, my heart swells with gratitude. Your mentorship, laden with wisdom and patience, has been quintessential in molding this endeavor. To all who have touched my academic odyssey, my gratitude is boundless. My journey, shaped by divine providence, familial bonds, and invaluable guidance, is a cherished saga that fills my heart with an overwhelming sense of love and thankfulness.

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List of Abbreviations

Application/ Applications (App/Apps)

Assistive technology (AT)

Bring Your Own Device (BYOD)

Computer Assisted Language Learning (CALL)

Content Knowledge (CK)

Educational Technology Training Program (ETTP)

English as a Second Language (ESL)

Food and Drug Administration (FDA)

Individuals who were born after 1995 (Generation Z or Gen Z)

Grade Point Average (GPA)

Information and Communication Technology (ICT)

Institutional Review Board (IRB)

International Society for Technological Education's Standards for Instructors (ISTE)

Mobile-assisted language learning (MALL)

Mobile Technology Devices (MTDs)

Office for Human Research Protections (OHRP)

Pedagogical Knowledge (PK)

Technology Acceptance Model (TAM)

Technological Knowledge (TK)

Technological, Pedagogical, and Content Knowledge (TPACK)

CHAPTER ONE: INTRODUCTION

Overview

Mobile technology devices (MTDs) and their learning applications (apps) have evolved for decades (Gerbaudo, 2017). Today, cellular phones, especially smartphones, are the most advanced and technologically developed telecommunication tools (Alghamdi, 2022) that allow users to send and receive data and information in a mobile way spatially (Bingham & Witkowsky, 2022). MTDs and their learning apps are now applied as an educational tool in the educational system for teaching and learning (Nikolopoulos, 2020). Teachers integrate MTDs and their learning apps in classroom instruction, while students use their MTDs and learning apps to enhance their learning across multiple subjects. A possible challenge to integrating MTDs and their learning apps is that teachers may be limited when training in integrating technology into instructional activities (Gilakjani et al., 2019) and have low self-efficacy in utilizing MTDs in the classroom (Leem & Sung, 2018). In this study, the focus was to investigate and obtain a deeper understanding of how educational-technology integration training assists college-level foreign language instructors in delivering effective lessons. In this chapter, the focus is to detail background information, the problem statement, the purpose statement of this study, the significance of the study, research questions, and definitions providing the basis for this study.

Background

Technology integration in the classroom improves traditional teaching methods and engages students more with learning (Etcuban & Pantinople, 2018). It is unclear whether one type of mobile technology training for foreign language instructors is more effective than another for facilitating and delivering foreign language lessons and curricula (Etcuban & Pantinople,

2018). It is also difficult to clearly define what objective scale to use to determine foreign language instructors' level of technology adoption in conveying curriculum. In this study, the researcher will seek to investigate the challenges of mobile technology training and objectively assess the level of technology adoption by exploring different types of exercises and perspectives of foreign language teachers on the subject.

Historical Context

Digital technologies were introduced into the educational system in the U.S. in the 1980s (Pedro et al., 2018). Schools were introduced to digital technology through the personal computer and the internet in the 1990s. MTDs and social media platforms became popular and became widely used in the U.S. and worldwide in the 2000s (Pedro et al., 2018). MTDs and media platforms have become a new learning modality for schools, colleges, and universities. Mobile learning has evolved in various directions since the introduction of mobile devices to the public in the 2000s (Pedro et al., 2018). In June 2007, Apple introduced the first iPhone product to the public. In late 2009, approximately 34 million iPhone devices were sold. The iPhone developers developed 100,000 applications, which were made available through Apple's App Store to be downloaded free of charge or purchased. By 2010, three billion iPhone applications had been downloaded worldwide (Seriot, 2010). People use their smartphones and applications for various activities, such as reading news, accessing academic information, entering social media sites, entertainment, watching online movies, and listening to music (Hatun Ataş & Çelik, 2019). Mobile learning has positive characteristics: mobility, immediacy, access, convenience, and ubiquity (Pedro et al., 2018). While more recent mobile technology advances have focused on more personal information through social media sites, schools can benefit from the

technological features of mobile devices such as location awareness or GPS, augmented reality, and motion detection location (Pedro et al., 2018).

In the past 20 years, mobile computers have been increasingly integrated into educational contexts. Mobile technology has led many individuals to carry small portable computers, such as smartphones, iPads, tablet personal computers, and e-book readers (Sung et al., 2016). According to Pew Research Center (2019), 96% of Americans currently own some cell phone device, but 81% own smartphones, a 35% increase from the first survey of smartphone ownership conducted by the Pew Research Center in 2011. In addition, besides owning smartphones, approximately three-quarters of American adults also own desktop computers, laptops, tablets, and e-reading devices. Combined with wireless communication, these MTDs have been useful in traditional classrooms and informal learning environments (Sung et al., 2016). In recent years, teachers and students have their own mobile devices combined with Wi-Fi to be used in classrooms (Sung et al., 2016). Teachers do not focus solely on preparing PowerPoint presentations or Excel presentations. They also must incorporate MTDs and their learning apps into the lessons in the classroom (Bernacki et al., 2020). Teachers use their MTDs and learning apps to support traditional classroom instruction and gather and promote teaching methods such as cooperative learning and instruction outside of the classroom (Bernacki et al., 2020; Sung et al., 2016).

Similarly, smartphones can make students' lives more efficient and information more accessible because smartphones are much smaller and lighter than desktop computers and laptops (Anshari et al., 2017). These devices can also take video and audio recordings and assist with watching live videos or presentations wherever and whenever. In addition, smartphones and other kinds of MTDs promote a green environment and can easily store information; teachers

and students can access and view lecture notes through reading applications such as PDF, Word, and PowerPoint without printing out the lecture notes (Anshari et al., 2017).

Social Context

Using MTDs and their learning apps can increase student engagement and motivation in learning through dynamic, real-time feedback and scaffolding (Bernacki et al., 2020). Teachers and students can learn seamlessly, communicate across formal and informal learning environments, and access various digital learning resources through mobile technology devices (Bernacki et al., 2020; O'Bannon et al., 2017). Similarly, MTDs and their learning apps are utilized for collaborative, social, and educational goals (Hua, 2019; Orben et al., 2019), allowing users to contribute to group projects or meetings and receive notifications from others (Tuhkala & Kärkkäinen, 2018). Incorporating mobile learning theory in today's society is necessary to help learners collaborate with one another (Bernacki et al., 2020). Bernacki et al. (2020) further suggested that researchers must also pay attention to the social aspects of mobile learning and must consider emotional, motivational, and cognitive barriers and challenges. Users must experience why they do and do not effectively or successfully utilize these devices on their own or interact with others (Bernacki et al., 2020).

Barriers that cause teachers not to integrate technology in classrooms successfully include having inadequate knowledge and experience of technology training, having limited time and lack of internet access, and a poor connection (Muslem et al., 2018). School leadership and government may have to review their school budget allocation to improve access to and the quality and effectiveness of internet use (Adnan & Tondeur, 2018). Instructional technology training can inspire schools to purchase internet data regularly and repair broken mobile devices on time (Adnan & Tondeur, 2018). Teachers often complain that they spend significant time

searching for appropriate instructional materials to accompany their lessons (Leem & Sung, 2018). It is important to take advantage of teachers' abilities and skills in mobile technology integration to improve how they may effectively deliver curriculum in the classroom (Adedoja & Abimbad, 2016).

Conversely, older teachers may have negative attitudes toward MTDs and their apps, particularly concerning the social effects of mobile technology usage in the classroom (Adedoja & Abimbade, 2016). These concerns include activities unrelated to education, such as communication with friends, using social media sites, gaming sites, chatting, personal development, and shopping (Adedoja & Abimbade, 2016). Teachers and students must learn about ethics and social responsibility, topics that deal with appropriate mobile technology usage (Montiel et al., 2020). Once they are allowed in the classroom, MTDs' misuse can disrupt lectures and learning among students (Santos & Bocheco, 2017). Kholxodjaeva Dilfuza (2021) has referred to data provided by Froese et al. (2012), indicating that 27 % of students who text during lectures have lower scores on their quizzes than those who have paid attention. The main disadvantage of the presence of MTDs and their learning apps in the classroom is their usage for purposes unrelated to learning, which can lead to 90 % of students not being attentive during lectures and 80% of students missing instruction (McCoy, 2013). 47% of faculty members have approved and indicated appropriate technology use in class on their syllabus (Bayless et al., 2013), whereas 29 % do not have a statement that provides the appropriate use of technology (Bayless et al., 2013). Santos and Becheco (2017) referred to Langmia and Glass' (2014) research finding that interventions for managing MTDs in the classroom were varied, from putting guidelines usage into the course syllabus to prohibiting the devices from being used in the classroom. Without clear policies, students may be uncertain of the appropriate or

inappropriate in-class use of their MTDs (Jackson, 2013). Santos and Becheco (2017) referring to McCoy's (2013) research survey, indicate that most students were opposed to having MTDs be banned in the classroom. Additionally, Campbell's (2006) study found that banning MTDs in the classroom was not the solution for improving students' education. Banning MTDs took away benefits such as documenting lessons, and/or recording teachers' lectures. Santos and Becheco (2017) further referred to the survey conducted by Baker et al. (2012), indicating that teachers and students in American universities who were participating in the study had different perceptions of mobile technology devices usage and policies. School leadership must consider teachers' and students' perspectives when developing the Bring Your Own Device (BYOD) policies (Baker et al., 2012). Many students in American universities oppose complete bans of their MTDs in the classroom (Baker et al., 2012).

New generations of students, millennials and Generation Z, are familiar with operating MTDs; thus, teachers may need new ways of incorporating MTDs and their learning applications to foster and develop students' critical thinking skills (Montiel et al., 2020). The term "Generation Z" refers to individuals born after 1995 who enter the workforce and tend to be digital natives and quick decision-makers (Dauksevicuite, 2016). The typical Generation Z individual is the first generation born into a digitally connected world, and they live and breathe technology (Cilliers, 2017; Dauksevicuite, 2016). Generation Z individuals differ from individuals born in previous generations in how their brains respond to their external environment, not because of genetics (Cilliers, 2017). The brains of Generation Z individuals have become more advanced and wired to complex visual imagery (Dauksevicuite, 2016). As a result, the part of the brain responsible for visual ability has been far more developed, making visual forms of learning more effective (Cilliers, 2017).

Theoretical Context

In the context of this research project, the self-efficacy theory serves as a guiding framework to investigate how instructors use and incorporate MTDs into their lessons. MTDs are increasingly important because they integrate computational capabilities with connecting capabilities in a single device (Khaddage, 2013). Their allure in the field of higher education is rooted in the portability of their instructional methods and the mobility of the students who participate in them (El-Hussein & Cronje, 2010). With the use of MTDs, instructors can provide students the opportunity to simultaneously study, participate in learning activities, and debate ideas in formal and informal learning platforms (in and out of classrooms) during classroom sessions or in locations other than classrooms (Ningsih et al., 2022). It indicates how well instructors will utilize mobile technology in the classroom and how much faith they have in their technological ability. When, how, and why mobile learning devices (MTDs) and the learning applications they support are employed to improve and enhance teaching and learning are all contingent on the instructors' ability to make instructional decisions at both the technical and classroom levels (Ningsih et al., 2022; Uerz et al., 2018).

A person's impression of their usefulness and ability to learn new technologies are directly influenced by their level of self-efficacy and the degree to which they believe they can be successful in mastering such technologies (Shea & Bidjerano, 2010). Self-efficacy is an essential concept in Bandura's (1982) social cognitive theory. It examines the complex interplay that exists between cognitive ideas, one's surroundings, one's talents, and one's emotions. When it comes to having an impact on the world, it is considered significant since it affects the decisions one makes when presented with new circumstances or abilities, such as using classroom technology. There is a positive correlation between self-efficacy and the following:

consequences of accomplishment, self-regulation, and cognitive learning processes (Shea & Bidjerano, 2010). Insights from the extant body of literature help understand a correlation between higher levels of self-efficacy and greater tenacity in new undertakings (Dweck & Leggett, 1988; Schunk & Meece, 2005). When compared to concepts such as self-concept and self-esteem, self-efficacy may be differentiated from these ideas since it focuses on an individual's perceptions about their capacity to do a certain activity within a particular setting.

People with a high sense of self-efficacy are more driven and ready to put in more effort when presented with new responsibilities and duties, especially if they believe they have a chance of succeeding (Schunk & Meece, 2015). There is a possibility of a slowing down in the rate at which new mastery experiences translate into altered views about one's effectiveness in some domains (Bandura, 1982). Through longitudinal research, it may be possible to understand better the nature of changes that occur in self-efficacy across time (such as the one conducted in this study). Evaluations of one's self-efficacy are heavily influenced by four primary categories of data: mastery (also known as enactive or real experiences), modeling (also known as vicarious experiences), coaching (also known as verbal persuasion), and physiological responses (Hinton, Simpson, & Smith, 2018).

The formation of self-efficacy strongly depends on mastery experiences. The normal outcome is a rise in self-efficacy, and the typical outcome of failure is a fall (Bandura, 1982; Schunk & Meece, 2005). The purpose of this research was to determine whether or not the self-efficacy ratings of instructors were affected by the level of mastery they had achieved in the context of adopting mobile technology into their classrooms. "Modeling," which refers to the practice of observing similarly talented people thriving in settings that are analogous to one's own, can inspire an observer to adopt behaviors that are analogous to those of the model subjects

if the observer believes they are capable of achieving comparable results (Schunk & Pajares, 2001). If the model does not perform its function in the appropriate manner, the observer's sense of competence may be negatively impacted. Coaching or verbal persuasion by a trusted person may also impact a person's wanting to attempt new or difficult activities, although this effect may not be long-lasting. There may also be some influence on the desire to try new or difficult activities from another trusted person (Schunk & Meece, 2005).

Self-efficacy in using the internet may be subdivided into a number of different subcategories, such as effectiveness with a particular device (such as a laptop or smartphone) and efficacy in integrating technology into the classroom. Enactive mastery has the most significant impact on technology-related self-efficacy, just as it does on self-efficacy in other areas (Ertmer & Ottenbreit-Leftwich, 2010). According to expert findings, one of the most significant considerations when bringing technology into the classroom is the level of technical self-efficacy among the students (Abbit & Klett, 2007; Celik & Yesilyurt, 2013; So, Choi, Lim, & Xiong, 2012). For educators to develop a sense of technological self-efficacy, they need time to get familiar with emerging technology and the self-confidence that comes from "little victories" (Ertmer & Ottenbreit-Leftwich, 2010). The use of technology in the classroom has a beneficial impact. In addition, two distinct subcategories may be applied to self-efficacy in the classroom. Instead of placing all of their faith in the opinions of their pupils, they are more likely to research the efficacy of their methods of instruction and practices in the classroom (Protheroe, 2008). On the other hand, it is conceivable for a teacher to feel competent in the classroom yet less competent while utilizing technology (Shinas, Yilmaz-Ozden, Mouza, Karchmer-Klein, & Glutting, 2013).

Another theory that has been used in the integration of technologies into class instructions which is the Technology Acceptance Model (TAM). The TAM is a research model that can predict individuals' intention to perform a specific behavior to complete a targeted task (Lai, 2017; Rahimi et al., 2018; Maranduet et al., 2019). The TAM also can predict the users' acceptance of technology. Granic and Marangunic (2019) and Scherer et al. (2019) suggested that the TAM may predict teachers' technology adoption and acceptance of teaching with technology for classroom instruction. The TAM is a fundamental theory that may be used to investigate how technology influences an individual (Buabeng-Andoh & Baah, 2020; Olumide Durodolu, 2017).

The study by Rahman et al. (2019) has revealed that teachers accept and adopt technologies to be integrated into lessons if they have more confidence in their own capability to use the instructional technologies. Teachers have positive perceptions towards the Learning Management System (LMS), but they are doubtful on perceived usefulness and the ease of use of the LMS (Mafuna & Wadesango, 2017). Some teachers may have challenges on the LMS application and additional training may need to be provided for these teachers to increase their confidence in the use of the LMS for classroom instruction (Mafuna & Wadesango, 2017).

Technology acceptance affects teachers' decision to integrate technology into classrooms (Vanessa et al., 2019). Teacher technology programs may need to improve teachers' perceptions of the use and integration of MTDs and their learning apps into a specific curriculum (Vanessa et al., 2019). Teachers may take time to adopt technology to be integrated into classroom instructions, depending on how they perceive the technology and their level of acceptance of it (Baturay et al., 2017). For the purpose of my research study, only self-efficacy theory will be

focused and used to understand the integration of MTDs and their learning apps into foreign language curriculum.

Problem Statement

The problem is that, sometimes, teachers' lack of time and confidence to integrate new technologies, particularly when their schools do not provide them with adequate training and technical support, results in technical difficulties during the adoption and integration of Mobile Technology Devices (MTDs) for college-level foreign language instructors delivering foreign language curriculum. These training deficits may decrease their confidence in incorporating MTDs and learning apps into their classroom (Drajati et al., 2018). In addition, instructors must determine how to prevent these gadgets from being a cause of disturbance (Dahlstrom, Walker, & Dziuban, 2014). Employing mobile devices as teaching tools, as opposed to aids, to improve learning would be a further difficulty (Lai & Lee Smith, 2017).

In actuality, it is impossible to embrace and adapt to mobile-device-based instruction without professional development opportunities to enhance instructors' technical and pedagogical content expertise. Perhaps the most significant impediment relates to the attitudes and approaches of instructors to incorporating new technology (Tarman et al., 2019). The beliefs of instructors about how mobile devices and apps might be incorporated into classroom practice are likely to influence how students use mobile technology for learning (Lai & Smith, 2017). Even if there is adequate technology access in schools and teachers are provided with professional development training, these two events do not mean that teachers understand how to integrate technology into their class's instructional activities (Harell & Bynum, 2018). A professional development training program focusing on integrating technology in classroom activities may help teachers become more skillful and confident with using MTDs to enhance lessons

(Gilakjani et al., 2019). The main barriers that cause teachers not to integrate technology into their classrooms successfully are having inadequate knowledge and experience of technology training, limited time, lack of internet access, and poor internet connection (Muslem et al., 2018).

The use of MTDs and learning apps help improve educational institutions' existing curricula and educational management processes and resolve the shortage of instructional materials and high student-to-teacher ratios (Sahito & Vaisanen, 2017). Teachers might willingly accept new technologies and focus more on integrating iPads into lessons; however, teachers tend to have difficulty incorporating a single device into a classroom with multiple students (Barbour et al., 2017). Importantly, this study's main concerns are this barrier and how that difficulty may cause decreased confidence in integrating a mobile technology device in the classroom. A lack of pedagogical method development and poor technology adaptation to deliver lessons can affect classroom technology integration (Francom & Moon, 2018). Furthermore, teacher preparation programs can help teachers gain confidence and experience operating and integrating technologies into class instruction (Francom & Moon, 2018).

Purpose Statement

The purpose of this case study was to understand the integration of MTDs and their learning apps into foreign-language curriculum by foreign-language instructors at two colleges in the Mid-Atlantic region of the U.S. At this stage in the research, the integration of MTDs and their learning apps into foreign-language curriculum will be generally defined as capability of understanding and incorporating MTDs and their learning apps into the classroom. The study relies on the self-efficacy theoretical framework to present the research on the need to integrate the use of MTDs in college-level foreign language learning. Whereas many studies have been undertaken on the advantages of technology integration in the classroom, there is a paucity of

literature in the foreign language teaching field regarding the use of mobile devices and applications in personal learning and how teachers use them in their teaching at the tertiary level, especially among foreign language teachers (Lai & Lee Smith, 2017; Sanchez, Cortijo, & Javed, 2014). One of the primary objectives of this work is to assist in closing this research gap. In this study, the focus was to provide insight into how college-level foreign language teachers view and incorporate mobile devices and apps into their teaching and personal learning.

Significance of the Study

The use of technology is vital to an education system both in terms of teaching and learning. Integrating technology into the classroom provides more opportunities for teachers to offer students a wider range of information and educational materials related to class lessons (Lawrence & Tar, 2018). Students also receive educational materials that are up to date and relevant to daily lessons (Lawrence & Tar, 2018). Using MTDs and learning apps as educational tools can help teachers deliver instructional practices to students in the classroom (Zhai et al., 2018).

Theoretical Perspective

As previously mentioned in this chapter, self-efficacy is the ability and capability to complete a specific task (Pröbstl & Schmidt-Hönig, 2020). Technological self-efficacy is essential in determining teachers' technology integration into the classroom (Njikul et al., 2020). The use of MTDs and learning apps assist in teaching and learning English as a second language and improving the math skills of low-performance students (Ababneh, 2017; Panteli & Panaoura, 2020). Thus, developing teachers' technology integration self-efficacy levels may also enhance the use of technology in mathematics classes. Furthermore, self-efficacy is vital for how teachers master and enhance their technology practice. Teachers who are capable and have high self-efficacy in operating information communication technology (ICT) in their practice will utilize it

in their curriculum (Hatlevik & Hatlevik, 2018). Moreover, the authors suggested a positive association between teachers' self-efficacy levels and the use of ICT in their teaching practice. Additionally, positive technology self-efficacy is essential to integrating technology into curricula (Kent & Giles, 2017). Thus, teachers' technology self-efficacy is a significant indicator of the likelihood of using instructional technology in teaching practices (Kent & Giles, 2017).

Empirical Perspective

This study is important because a limited number of primary research studies focus on studying mobile technology integration into the curriculum among foreign-language instructors. There is a study examining technologies that have been used by college counselors to provide counseling tasks related to high school students' education and the school-to-work transition (Becerra & Deslonde, 2018). Another primary research study on TAM was a quantitative study investigating the relationship between English as a Second Language (ESL) and teachers' attitudes toward integrating technology into classrooms, computer self-efficacy, and computer anxiety (Rahman et al., 2019). Qualitative case study design was more appropriate in this study. Journal prompts and fifteen foreign language syllabi were utilized with hand coding techniques for inductive and deductive thematic analysis coding. The raw interview data were transcribed by Transcribe application downloaded from the iPhone App Store into transcripts to prepare for inductive coding and deductive coding approach of thematic analysis. The data collection and data analysis process will be discussed in Chapter Three.

Practical Perspective

Technology integration in the classroom tends to improve the traditional ways of teaching, making it easier for students to connect with learning content (Etcuban & Pantinople, 2018). Teachers can select and use different applications and online resources to enhance class instruction. Cho et al. (2018) highlighted the strong positive effects of mobile learning for

students who receive technology language instruction—these students have higher test scores than those who do not receive mobile learning language instruction. In addition, using mobile technology devices in terms of smartphones, tablets, and assistive technology (AT), helps enhance learning and increase educational and social integration among exceptional learners (Ismaili & Ibrahimi, 2017).

Research Questions

The study utilizes one central research question along with two sub questions. The questions focus on the foreign language instructors' experiences and capabilities with integrating MTDs and their learning apps into their foreign language curriculum as a way of enhancing self-efficacy and their perspective on the value of using MTDs to learn foreign languages among students. Integration of MTDs and their learning apps can increase teaching-learning effectiveness to provide and deliver information related to curriculum (Habibi et al., 2019). Sometimes teachers have lack of confidence to use and integrate technologies (Ghavifekr et al., 2016) because they may not receive adequate and ineffective instructional technology training from their schools (Habibi et al., 2019). Using and incorporating technologies in foreign language curriculum may help motivate students to learn. But sometimes students use their mobile technology devices for other activities that are not related to their foreign language classes (Amez & Baert, 2019). The following questions are utilized to guide the research.

Central Research Question

What are the lived experiences of foreign language instructors implementing mobile technology devices and their learning applications in their curriculum?

Sub-Question One

How does foreign language instructor training influence the preparedness and willingness of foreign-language instructors in integrating MTDs and mobile applications within the curricula to enhance self-efficacy among students?

Sub-Question Two

What are the barriers to the integration of MTDs and mobile applications by foreign-language instructors in the curricula as a way of enhancing self-efficacy?

Sub-Question Three

What is the perception of foreign-language instructors on the value of MTDs and mobile applications on enhancing self-efficacy among students?

Definitions

1. *Confidence* – It refers to a belief in one's qualities and abilities (Tentama et al., 2019).
2. *Efficacy* –It refers to the power or ability to perform a specific task to the expected degree (Lewis et al., 2017)
3. *E-learning technology* – It refers to various electronic communication methods to support teaching and learning. E-learning technology relies on mobile technologies such as computers, laptops, interactive televisions, iPads, iPhones, and smartphones (Marandu et al., 2019).
4. *Generation Z* – It is a demographic term used to describe individuals born after 1995, living in an era of high technology communication. Individuals categorized as Generation Z usually depend on technologies and social media (Gaidhani et al., 2019).

5. *Mobile technology devices (MTDs)* – Computing devices that are used for communicating information, such as a smartphone or a tablet computer (Rothstein et al., 2020).
6. *Instructional technology training* – It is a practice of incorporating various technologies for education (Velazquez, 2020).

Summary

The use of mobile technology devices and mobile apps, particularly smartphones and tablets, is becoming more commonplace in the educational community. The fact that more people are using these devices does not excuse the fact that many teachers of foreign languages do not efficiently use the technology available to them. Specifically, it may be because many instructors have a poor impression of such technologies. Thus, there was need to investigate academics' perceptions of the value of incorporating mobile teaching devices (MTDs) into their teaching activities, the influence of training in preparing foreign-language instructors in the efforts to effectively integrate mobile teaching devices and mobile applications in the curricula, as well as the barriers to the successful adoption of these technological devices in their pedagogical approach. It is crucial to have a deeper understanding of college-level foreign-language instructors' experiences relating to the limitations of training in technology integration. Training in technology integration in classrooms increases the instructors' job satisfaction and teaching performance (Pröbstl & Schmidt-Höni, 2020). Having adequate training in technology integration in classrooms also helps instructors with gaining a higher self-efficacy in operating and integrating MTDs and their learning apps. It can also help instructors' confidence in using technologies to present and explain educational materials (Pröbstl & Schmidt-Höni, 2020). However, some teachers might receive adequate training but still not feel comfortable using

technology as a communication medium because of personal preferences, beliefs, and values (Pröbstl & Schmidt-Höni, 2020). Therefore, teachers should be more open to constructing and presenting their lessons using MTDs to link students to foreign-language learning applications. MTDs and their learning apps will assist instructors with teaching outside the classroom, education productivity, lesson preparation, and effectiveness. In addition, students can increase their foreign-language abilities and skills in speaking and writing performance with the implementation of smartphone-assisted practice (Durán-Bautista & Huertas-Malagón, 2021).

CHAPTER TWO: LITERATURE REVIEW

Overview

Chapter Two presents the theoretical framework and literature review relevant to the current study of instructors' integration of MTDs and their learning applications into foreign-language curriculum instruction. The study is grounded in Bandura's (1971) social learning theory, specifically, the self-efficacy portion of the theory. In this chapter, the focus was to detail fundamental knowledge of the variables that influence technology usage in foreign-language classrooms, focusing on teachers' desire to utilize technology for instructional reasons. The evaluation consists of three elements. The first section investigates the incorporation of technology in the classroom, studying both teacher and student perspectives. The second component discusses instructional technology integration training, while the third section examines the potential implications of mobile technology integration.

Theoretical Framework

Self-efficacy is defined as an individual's beliefs that determine how well one can perform a specific task and succeed in a particular situation (Bandura, 1977, 1986). Similarly, Pröbstl et al. (2020) suggest that self-efficacy influences the state of mind, determination, and motivation to perform tasks. Individuals may not have the confidence to achieve their tasks and even lose confidence in their ability to continue to perform their activities if they do not have adequate self-efficacy (Yang, 2020). There are two aspects of defining self-efficacy. First, self-efficacy is a belief in one's perceived capability to perform tasks (Bandura, 1986). Being capable of performing tasks does not necessarily indicate that individuals' abilities match a specific domain (Bandura, 1986). The second aspect of Bandura's (1986) self-efficacy is self-perceptions of being competent in achieving goals. Bandura (1977, 1986, 1997) suggested that self-efficacy

is a combination of how individuals possess knowledge and skills to do a specific task and the conviction they successfully perform tasks under difficult circumstances. It is important to note that the difficulty of an individual's circumstances can offset their goal of successfully accomplishing a task or achieving the desired outcome.

A number of studies have been carried out to study the impact that educational technology has on student self-efficacy and the factors that contribute to self-efficacy in virtual environments (Durán-Bautista & Huertas-Malagón, 2021; Pröbstl et al., 2020; Yang, 2020). According to Bates (2007), the attitudes of the learners are one of the most important factors in boosting one's sense of self-efficacy in online learning environments. According to the school of thought, students who can support themselves academically have an adaptable worldview and see online learning as a skill that can be acquired. Ratings of one's self-efficacy tend to be lower among those with a fixed mindset on their capacity for online learning. Both Lailiyah and Cahiono (2017) showed there is a correlation between self-efficacy and incorporating technology in the classroom. They hypothesized that factors such as age and linguistic proficiency could diminish the connection between self-efficacy and the use of technology. Technology-based activities, as stated by Wu and Yang (2016), have the potential to increase students' self-directed language learning activities as well as students' sense of self-efficacy. As per the findings of Peechapol et al. (2018), many different factors influence self-efficacy in online learning. According to the research findings, receiving feedback on their work online significantly increases students' feelings of self-efficacy. They suggested that increasing engagement in online settings led to improved levels of self-efficacy among students. They believe that elevating students' levels of motivation and attitude may result in increased levels of self-efficacy. Peechapol et al. (2018) concluded that learners in settings based on technology are driven more

by integrative motivation than instrumental motivation. He describes motivated online learners as having "desires (wants), exhibiting positive impact, being excited, having expectations," and expressing "self-confidence (self-efficacy)" (Peechapol et al. 2018, p. 2–3).

According to Su et al. (2018), technology-based education has a significant impact on the development of learner self-efficacy. To achieve the goal, instructors should emphasize the use of learner self-assessment in online educational situations. Ningias and Indriani (2021) researched the views of self-efficacy held by online learners. Students with a healthy sense of self-efficacy are more knowledgeable about the material available online and can convey it to their classmates. They contended that confident students are more inclined to employ specific strategies for online lectures, a result of the classroom atmosphere that fosters verbal interaction among them. According to their findings, when participating in online education, learners' self-efficacy is affected by various elements, including prior knowledge, experience, public support, and emotional aspects. Pantu's (2021) research showed a correlation between learner self-efficacy and academic flow in online learning settings. According to the findings of these researchers, it was essential for self-sufficient learners to be able to self-regulate and self-manage their learning and online activities to be successful in online learning situations. Ngo and Eichelberger (2021) found that students' familiarity with information and communication technologies is also an important factor in determining their level of learning self-efficacy. The confidence that students have in their own abilities protects them from shirking challenging coursework while they are studying online. Lian et al. (2021) reported that real online encounters with other language learners were quite crucial when it comes to a person's perception of their own level of self-efficacy. They argued that engagement in online activities might boost students' ability to communicate and their level of self-confidence. During the COVID-19 outbreak, an

idea for more practical activities that include learning a language via technology was suggested. Rahmania (2020) alluded that one's sense of self-efficacy is directly tied to their level of success in online language learning. She believes that the change in learning settings that has occurred due to the COVID-19 outbreak has affected the students' sense of self-efficacy. She explains in her study that past experience with online assignments may influence the learner's sense of self-efficacy, particularly in the case of learners who begin an online course with a high level of motivation.

Several studies have been carried out to study how technology affects the learner's sense of their capabilities. For instance, Namaziandost and Akmak (2020) asserted that female students in flipped classrooms had greater self-efficacy levels than male students. Even though the same instruction was given to both genders, it largely remained the case. The high levels of female participation in flipped educational conditions in language learning, group discussions, teamwork, role-playing, and problem-solving were related to their outcomes. Kasuma et al. (2021) perceived that the students' attitudes toward flipped learning shifted positively when their levels of self-efficacy, positive emotions, and motivation improved. These scholars suggested that students who were self-motivated and proficient complete their online English homework using several social media sites. Moreover, the researchers hypothesized that students' performance would increase if they had previous exposure to flipped learning environments that included online learning. The experts agree that using flipped classrooms helps students feel more empowered and gives them a greater sense of agency in their learning.

In another study, Tavakoli et al. (2019) investigated how students' perceptions of their language learning efficacy were affected by using task-based resources. According to them, the novelty of online education in the context of Iranian society, in addition to the students' active

participation, may be at least partially responsible for their success. It has been discovered that engaging in the interpersonal connection may increase one's sense of self-efficacy and academic achievement. Honarzad and Rassaei (2019) were of the view that incorporating technology into activities designed to foster language acquisition significantly influences students' levels of self-reliance, self-efficacy, and motivation. Insights from Balaman (2020) revealed that the implementation of digital storytelling, which combines elements of narrative and multimedia, affected the students' perceptions of their levels of competence and attitudes toward educational technology. Balaman asserted that the feeling of having mastered something, which acts as a trigger component, helps explain why students give themselves high self-efficacy ratings. Throughout her investigation, Balaman had a sense of accomplishment due to the student' retellings of five separate stories in the technology-based teaching environment. The introduction of the method of gauging mastery experience in the classroom led to an improvement in students' levels of self-efficacy.

Using mobile applications within educational technology provides students with more learning choices. For example, Rachels and Rockinson-Szapkiw (2017) researched Mobile-assisted language learning (MALL) to evaluate how it influences the academic achievement of primary school students and how they feel about their sense of self-efficacy. Researchers found that Duolingo has a significant impact on both the academic accomplishment and perceived level of self-efficacy of language learners. These educational researchers believe that gaming might be used as a tool to encourage constructive attitudes among those who are learning a language. They reasoned that gamification would make it easier for students to feel confident in their abilities.

There is a negative relation between the strength of self-efficacy and the difficulty of a challenge (Bandura, 1977). Individuals with a high awareness of their self-efficacy tend to act

more courageously, willingly accept their current situation, and try to modify or change it towards the positive (Pröbstl & Schmidt-Hönig, 2020). Self-efficacy theory is critical in assisting teachers to become more confident with integrating mobile technologies. Also, it helps understand how teachers perceive the ease of use of mobile technologies in curriculum and instruction (Joo et al., 2018). Teachers also demonstrate self-efficacy in using technology for instruction through teaching behaviors, such as instructional planning and preparing lesson plans (Giles & Kent, 2017). Teaching and learning foreign languages require strong motivation, positive self-efficacy, and learning efforts that can help improve and enhance the teaching and learning process (Giles & Kent, 2017; Yang, 2020).

Related Literature

In this section, MTDs are discussed in the context of their benefits for teaching and learning situations and the potential positive and negative impact of MTDs on class curriculum instruction. MTDs have positive and negative effects, depending on whether the teachers have experience integrating technology. Teachers' positive experiences in incorporating MTDs and their learning apps include the teacher being able to produce up-to-date class materials and having lessons delivered to students fast and efficiently (Aldholay et al., 2018). Teachers can access class content online and complete tasks like posting class announcements and grading student assignments without being in the physical classroom (Aldholay et al., 2018). Students are more engaged and interact with one another when they can access digital materials on demand. They can increase their learning by having more time to prepare and look for information relating to their lessons outside the classroom (Aldholay et al., 2018). Teachers' negative experiences in incorporating MTDs, and their learning apps include not having the technical acumen to utilize and integrate MTDs and their learning apps into their curriculum and

instruction (Dinçer, 2018; Tyler-Wood et al., 2018). A negative consequence is that teachers do not feel comfortable and lack confidence in using MTDs and their learning apps as a medium for teaching and learning (Dinçer, 2018; Tyler-Wood et al., 2018). In addition, students may not pay attention to lectures because they use their MTDs and apps to do activities unrelated to the lessons (Mueller et al., 2012).

Technology Integration in the Classrooms

Technology acceptance is defined as the intention and/or actual use of technology by experts within specific fields (Sanchez et al., 2014). Education adoption of technology may be predicted using four variables proposed by Gu, Zhu, and Guo (2013): result expectation, task fit, social influence, and personal considerations. People's attitudes and ideas about how beneficial and simple it is to utilize a piece of technology are at the heart of outcome expectation research. Students often rely on technology to help them achieve their goals, such as utilizing Facebook to meet new people and stay in touch with old friends through common interests (Sanchez et al., 2014). The extent to which technology aids in the execution of a job is the emphasis on task fit. To illustrate the concept of task fit, Lee and Lehto (2013) provided examples of learning procedural tasks using YouTube videos. A person’s sense of self-efficacy while using technology is influenced by personal variables and societal norms, such as the notion that using technology is the social norm. Because classroom technology is built by instructors for the benefit of students, understanding the differences in technology acceptance between teachers and students should aid in creating classroom technology solutions that appeal to digital natives (Gu et al., 2013, p. 392).

Many students use technology daily, from Facebook to Googling, for information to communicate with others. Additionally, the sheer number of accessible materials is

overwhelming, making recognizing reputable information more difficult and eventually discouraging students from accessing and utilizing various sources (Purcell et al., 2013). Social media and the Internet help students receive information fast, but they may also prevent them from conducting more in-depth studies and improving their critical thinking skills. However, contrary to the claim that the Internet has resulted in a generation of slack-jawed pupils, the Internet has also resulted in a demand for bricolage, the process of piecing together information, in the constructivist approach. As such, it is essential that students use higher-order thinking abilities to assess and integrate the fragmented data.

Technology serves as a bridge between teachers and students, allowing for effective delivery methods (Singh & Samah, 2018; Zhang et al., 2020). Technology can exhibit positive properties in a classroom, increasing learning motivation and overall participation (Aldholay et al., 2018; Samah & Singh, 2018; Zhang et al., 2020). Educators can also use technology to advance their skills in the teaching and learning process (Abdurrahman et al., 2019). Technology can be integrated into teaching and learning activities, from the curriculum to models of methods for teaching and learning that increase the learning effectiveness both inside and outside the classroom (Syahrir et al., 2019). Many MTDs and their learning apps (laptops, smartphones, iPad, and tablets) have become learning and teaching tools with great potential inside and outside the classroom (Baek et al., 2017; Sung et al., 2016). MTDs and their learning apps can also be used to access classroom materials (Sung et al., 2016). Teachers and students can use MTDs, and their learning apps to access content and communicate with one another (Baek et al., 2017). Furthermore, students are more engaged and prone to interacting when accessing digital materials (Baek et al., 2017). By having access to materials of their choice, they can exchange their instant feedback and responses through their mobile device apps (Baek et al., 2017). Baek

et al. (2017) also mentioned that teachers played an important role in mobile technology learning and teaching because they could be presenters or moderators. In these roles, teachers could identify their students' interests, connect them with learning goals, and provide them with opportunities to succeed (Baek et al., 2017).

Teachers can effectively use technology to improve and enhance their curriculum. Students can access technology 24 hours a day and from any location (Singh & Samah, 2018; Zhang et al., 2020). MTDs and their learning apps and internet access are great tools that deliver information fast and efficiently (Aldholay et al., 2018; Samah & Singh, 2018; Zhang et al., 2020). Additionally, communication needs no longer be face-to-face in the classroom but can also be managed via text and video conferencing applications (Cortez et al., 2020). For example, Zoom and other face-to-face online apps can be as effective as actual classroom teaching even though it is virtual. In addition, online learning has a significant economic advantage because it can cut down costs on school tuition, travel, and supplies, as well as give students who live in rural areas a chance at an education (Aldholay et al., 2018; Samah & Singh, 2018; Zhang et al., 2020).

On the other hand, one main concern with using MTDs and their learning apps in the classroom was off-task behavior (Mueller et al., 2012). Off-task behavior can distract and interrupt students from focusing on a lecture. Mueller et al. (2012) stated that the graduate students who participated in their study used their MTDs and their learning apps during class for activities and did not disrupt the learning environment. Furthermore, the connectivity feature of mobile technology was seen as positive by most of the participants in the study. Mueller et al. (2012) highlighted that mobile devices' connectivity feature was considered a drawback. Some participants reported that accessing the 24/7 connectivity feature or internet connection gave

them no chance to step away from learning. Other students pointed out that they sometimes had issues with the internet connection and spent more time managing connectivity versus actual learning (Mueller et al., 2012).

Technostress could occur when individuals regularly had the extent of MTDs usage each day (Qi, 2019). Technostress includes techno-overload, techno-invasion, and techno-complexity (Qi, 2019). Techno-overload indicates situations where information communication technology (ICT) forces users to work longer and faster (Qi, 2019). Technology invasion means users can be connected constantly and be reached at any time, which may prevent them from having a work-life balance (Qi, 2019). Techno-complexity refers to the complexity associated with ICT, making users feel less confident about their existing skills to use technology for learning and working (Qi, 2019). In addition, individuals who spend long hours using MTDs and their learning apps for mobile social media had poor sleep quality, high levels of anxiety, and depression (Jiang, 2021). There is a negative effect on individuals' mental health when using MTDs and their learning apps for long periods, especially to learn and connect with people online. The pandemic of COVID-19 has forced students to turn toward a virtual academic platform and online learning. The emergence of online learning has become the primary and principal mode of teaching for teachers and learning for students. In contrast, face-to-face social interactions and social relationships have been kept to a minimum. An over-reliance on MTDs and their learning apps, including social media, causes higher anxiety and depression among students (Jiang, 2021).

As our society's dependence on technology grows, a new kind of learner has emerged: the digital native (Prensky, 2001; Tapscott, 1998). According to Prensky, the generation of students is special since they have grown up in a digital environment (2001). These pupils are digital natives and absorb and remember information in fundamentally different ways than their

forefathers (Prensky, 2001). He is credited with coining the phrase "digital native," and those born between 1980 and 1994 are assigned to that generation's native status and characteristics.

Tapscott (1998) defines the "next generation" as those born between 1999 and today between the ages of two and twenty-two. Like digital natives, the net generation is well-versed in digital technology and has its own set of personality characteristics and educational prerequisites. These qualities and qualifications include multitasking, nonlinear thinking, a social component to learning, speed, and an inability to tolerate slow-paced environments (Prensky, 2001; Rosen, 2010; Tapscott, 2008; Thompson, 2013). Students no longer see their electronic gadgets as examples of technology but rather as a regular and vital part of their everyday life (Bennett, 2012; Prensky, 2001). According to the US Census Bureau, the percentage of American homes using a personal computer increased from 8.2 percent to 78.9 percent between 1984 and 2012. (2012). These insights highlight the significance of technology and how easy it is to be accessible to more people.

According to more recent Pew Research Internet Project data, 66 percent of Americans said they would be lost without cell phones (Pew, 2014). Consequently, most of these gadgets are smartphones with web browsers, cameras, and voice-recognition software. These characteristics may promote learning and engagement (Prensky, 2001). Furthermore, according to Hedberg (2011), technology can disrupt the educational process. Because of technological discoveries and innovations, it is now feasible to learn about the world in a non-industrial classroom setting. The teacher-centric control of pedagogy, knowledge, and technology influences these processes and activities.

According to Prensky (2001), digital immigrants make up most of today's instructors. Despite being born before the digital era, they have absorbed and incorporated many

technological aspects into their everyday life. Prensky (2001) also suggested that teachers may retain a considerable percentage of pre-digital thinking, making conventional on-the-job training unproductive. The fact that there are differences between "digital natives" and "digital immigrants" demonstrates how difficult it is to improve educational achievements via the use of technology. They claim that present efforts to divide technology users into broad groups are unhelpful and emphasize the need to look at aspects other than age that may influence technology usage. They wonder whether the advantage of continued efforts to categorize customers widely is worthwhile. Gender, social level, cultural background, and interest all influence how individuals use technology (Bennett et al., 2008; Kennedy et al., 2010).

In light of these considerations, it is time to broaden the notion of "digital natives," as White and Le Cornu (2011) have done. In contrast to the native/immigrant dichotomy, it is unclear whether the end of the visitor/resident continuum has more significant value or higher technical abilities. Users can roam about the continuum as they choose, entering and quitting as they please depending on their preferences and goals. White and Le Cornu (2011) utilized the tool shed and gardening tools as an example. Visitors to the educational technology shed often arrive with a specific aim or activity in mind. They will not use technology after completing the task; the equipment will be stored, and the visitor will continue to resist using technology. The locals feel that instructional technology may be stored in the shed or in the garden. The garden's tenant seems comfortable and self-assured as they walk about, learning and extracting value from each encounter. There are several roles that any user may perform. In the opposite order, the tourist becomes a local, and the local becomes a tourist. A change away from the digital native/immigrant dichotomy and toward a dynamic interface paradigm may enable instructors and students to collaborate with technological tools without prejudice as they go along the

educational continuum. The majority of today's pupils, whether digital natives or anywhere in the center of the resident/visitor continuum, utilize technology daily. Diemer et al. (2012) expressed that it may be essential for personal or intellectual reasons. Today's pupils are more connected than earlier generations and may need new instructional strategies and procedures.

Teachers' Perceptions

The importance of teachers' technical self-efficacy cannot be overstated regarding student outcomes. Students' intrinsic motivation and self-direction are facilitated by teachers with high levels of instructional self-efficacy (Bandura, 1993). Teachers' self-efficacy attitudes, which have been linked to technological integration in multiple studies, are linked to technology. Correlation does not imply causation, even if these ideas are linked. Therefore, Kim et al. (2013) concluded that teachers' attitudes about technology integration do not always impact it (Belland, 2009; Chen, 2008, Kim et al., 2013). Technology competency is emphasized in the International Society for Technological Education's Standards for Instructors (ISTE).

- Teachers use their knowledge of the subject matter, teaching and learning, and technology to stimulate learning, ingenuity, and innovation in face-to-face and virtual contexts.
- When it comes to improving student achievement and developing the dispositions specified in the Standards, teachers must use current techniques and resources to provide authentic learning experiences with evaluations that reflect current best practices.
- Instructors exhibit the knowledge, skills, and work processes of an imaginative, global, and digitally based professional.
- Teachers who promote and exhibit the appropriate use of digital tools and resources constantly enhance their professional practice, serve as role models for lifelong learning, and show leadership in their school and professional communities.

- Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.

Using MTDs and their learning apps increase teachers' experience with technology as a complement to in-class teaching methods (Zhang et al., 2020). Both the teacher and student will need to learn the technical aspects, functions, and features of the technology and its limitations (Fernández-Batanero et al., 2019). Teachers should know about all features of digital technology, computer hardware, cellphones, internet networks, electronic devices, applications, and social media, as well as how to operate and incorporate them effectively in their teaching (Jannah et al., 2020). Fatimah (2017) suggested that some research findings on teachers' perceptions of integrating instructional technology indicated that technology helped motivate teachers' productivity in teaching and producing quality presentation materials (containing images, animations, videos, and PowerPoints). Teachers must create and promote an environment conducive to teaching and learning (Fernández-Batanero et al., 2019). For instance, the 126 Thai teachers who participated in the study by Boonmoh et al. (2020) believed that external motivations, more than internal motivations, influenced their use of digital technology in classroom instruction. Approximately 66.24 % of participants believed that external motivations affected their use of MTDs with their learning applications in the Thai EFL classroom (Boonmoh et al., 2020). Whereas 33.76% of all participants believed that intrinsic motivations affected their use of MTDs and learning apps in the Thai EFL classroom (Boonmoh et al., 2020). However, teachers still wanted to learn how to operate and integrate technology tools in the classroom to foster teaching and learning processes (Fernandez-Batanero et al., 2020). Teachers also use MTDs to find additional study materials they consider interesting and appropriate for class and lesson plans (Aldholay et al., 2018; Fernández-Batanero et al., 2019; Hafize et al., 2016).

To meet the requirements of digital learners, educational activities might need to be modeled after actual user behavior. The findings of Lorenzo, Oblinger, and Dziuban (2007) can be summarized as follows: "Students who are continuously linked to information and one another do not merely consume it as they would if they were disconnected. They first make it, and then they make it again" (p. 6). Students connect to both the knowledge and one another in a manner analogous to the use of social media on a personal level through participation in collaborative online learning activities. Students can access information and communicate it either synchronously or asynchronously through technological devices in a technologically humanistic way. Working in these virtual environments will eventually form a social group characterized by a decentralized authority, multidirectional cooperation, and communication (Lorenzo et al., 2007).

Teachers use preselected scope and sequence papers to direct instruction, and they anticipate that students will acquire the necessary knowledge through applying technology. Students' use of technology in informal learning settings is driven by their natural curiosity about its capabilities. The notion that "formal educational settings and daily contexts are distinct, including distinct activities with distinct aims and results, without necessarily privileging one over the other" may be something that educators need to take into consideration (Bennett & Maton, 2010, p. 325). Educational outcomes can be improved through the utilization of technology if, first, the similarities in the usage and environment of technology are recognized, and then, once that has been done, the similarities are capitalized on.

Jannah et al. (2020) discussed factors that prevented teachers from utilizing and integrating technology in learning and teaching. The authors noted issues relating to innovative solutions and policies regarding digital technology in the learning process (Haryanto et al.,

2018). In Nigeria, some educational institutions do not allow mobile devices in the classroom (Onyema, 2019). Some public and private schools even had policies that forbade students to take MTDs to school (Onyema, 2019). Schools also lacked widespread and consistent Wi-Fi availability to facilitate mobile teaching and learning platforms and activities (Onyema, 2019). Additionally, inadequate funding and budgetary concerns could decrease opportunities for students to experience digital learning. These students were left without having regular access to basic learning tools such as computers and tablets (Dinçer, 2018). Some barriers prevented teachers from successfully incorporating MTDs and their learning apps in their classrooms, the two main ones being that 60 % of teachers felt they did not have adequate technical training, and 37% claimed they did not understand how to implement mobile devices into lessons (Dinçer, 2018; Tyler-Wood et al., 2018). Teachers might feel frustrated when pivoting from traditional methods of teaching that involve a curriculum delivered by a teacher in person to new and modern technology and teaching and learning platforms (Harrell & Bynum, 2018; Thangajesu Sathish et al., 2020). Some teachers perceived technology integration negatively due to the time it took to incorporate technology into instruction and the necessary extra planning and training (Harrell & Bynum, 2018). Harrell and Bynum (2018) stated that: "Technology integration requires preparation, classroom management practices, and demands attention that is not normally spent in those areas. It is easier to just remain with the status quo" (p.12). Teacher training should focus on integrating activities with technology (Dinçer, 2018).

Moreover, it is essential to provide teachers with training and support to ensure that MTDs and their learning apps are used effectively to improve and enhance classroom instruction. Some researchers posit that carrying smartphones to the workplace could lead to negative impressions and negative impacts on teachers' work environments (Onyema, 2019). School

personnel opposed to utilizing MTDs and their learning apps may misunderstand those teachers who use their MTDs as being preoccupied instead with personal conversations via texting or social media (Onyema, 2019). Teachers may also be concerned that their students use their MTDs and apps for activities unrelated to education, such as texting, sending email, and checking social media apps (Aldholay et al., 2018; Faruk, 2017). These attitudes towards mobile technology integration can affect how teachers and students utilize MTDs and classroom learning apps (Onyema, 2019). Furthermore, some teachers were attached to traditional models of in-class instruction, which gave them more control, thus opposing modern technology integration in teaching and learning (Onyema, 2019). In addition, some teachers and students believe that using mobile devices in the classroom, especially smartphones, can be disrespectful (Onyema, 2019). Thus, the socio-cultural element may be a causal factor for some teachers adhering to the traditional teaching method (Onyema, 2019).

Students' Perceptions

The students' experience with using MTDs and their learning apps in the classroom is that they have more flexibility to be independent in learning (Hazaea & Alzubi, 2018). The use of technology in the classroom helps gain autonomy and motivation in learning a foreign language (Gafni et al., 2017; Hazaea & Alzubi, 2018), improves time management, and helps students' academic confidence and performance (Aldholay et al., 2018; Faruk, 2017; Kaliisa & Picard, 2017; Rivera Barreto, 2018). The study by Gikas and Grant (2013) also revealed that MTDs and their learning apps were beneficial for student learning. MTDs and their learning apps are convenient to carry and help teachers and students access information quickly (Hatun Ataş & Çelik, 2019). Constant connectivity provided by mobile devices can help students interact with class content and communicate better with teachers and peers (Hatun Ataş & Çelik, 2019).

MTDs' features and functions, together with its apps, allow students to learn in various ways, such as recording videos, voice memos, text messages, emails, and discussion threads (Hatun Ataş & Çelik, 2019).

In addition, the Apple App Store, Android, and Google Play offer a variety of language learning apps and applications of all kinds, many of which are available to be downloaded for free or at a nominal cost (Godwin-Jones, 2017). Smartphones integrate more comprehensive networking options and have built-in Wi-Fi and Bluetooth (Godwin-Jones, 2017). As more people rely on their smartphones with their built-in Wi-Fi connectivity and apps, cellular networks have become more advanced, dependable, and faster, with service providers offering various data plans (Godwin-Jones, 2017). MTDs allow students to access and download data and information independently, and students tend to have more control over what they want or must learn (Mussa, 2020). Utilizing MTDs for learning gives students more flexibility and convenience to connect to their class and course materials wherever they are (Mussa, 2020). Similarly, mobile-assisted language learning provides learners easy access to resources, low-cost, and user-friendly platforms. Such digital learning method allows learners to communicate with their teachers and classmates with no time and space constraints, unlike in-person classroom learning methods (Nuraenil et al., 2020).

Students can search for and download the mobile devices' apps of their interests. Mussa (2020) further stated that "learners learn all the capabilities that are included in each level within the entertainment, and they end up participating and persuading and do not realize that they are in learning the truth" (p. 33). The MTDs and their learning apps functioned as a bridge and the learning medium to improve the relationship between students, school, and classroom exercises (Mussa, 2020). However, intrinsic motivations could predict students' engagement in online or

classroom learning environments (Dunn & Kennedy, 2019). Intrinsic motivations predicted students' engagement in learning, while extrinsic motivations predicted the usage of technology-enhanced learning tools such as MTDs and learning apps (Dunn & Kennedy, 2019).

Tseng and Tsai (2010) have discussed a connection between intrinsic motivations and self-efficacy when engaging with online learning tasks. Students who consistently integrated their MTDs and learning apps into learning were intrinsically more motivated to do their tasks and had higher levels of self-efficacy. Students who were intrinsically motivated to use technology-enhanced learning also maintained higher grades and engaged more with technology for learning purposes (Dunn & Kennedy, 2019). However, it was challenging to keep students motivated and determined to use MTDs for learning outside the classroom (Hazaea & Alzubi, 2018). Students may overuse MTDs and apps for purposes unrelated to their studies, such as watching online movies, playing games, connecting with people through social media, and online shopping (Razzaq & Samiha, 2018). The survey conducted by Tseng and Tsai (2010) revealed the statistics of college students utilizing their smartphones on campus: 88% search for websites, 88% social networks, 78% for educational services, and 69% for emailing. MTDs, especially smartphones, was the most used equipment among college students on campus (Mohd et al., 2020).

Considerable research has been undertaken on the theory of motivation (Brophy, 2004; Steel & Konig, 2006). Because student motivation may influence learning outcomes and student engagement in learning activities, concerns about motivation are significant in education (Ciampa, 2014; Maehr & Meyer, 1997; Malone & Lepper, 1987). The idea of motivation encompasses "initiation, direction, intensity, perseverance, and behavior quality" (Brophy, 2004; Maehr & Meyer, 1997). In addition, Smith, Sarason, and Sarason (1982) describe motivation as a

desire, a need, or a process that drives an individual's action to attain a goal. The desire to participate and the reason for participation are established on the student's experiences, which serve as the student's motivational foundation (Brophy, 2004).

These traits provide a foundation for understanding why children connect with technology beyond the classroom. Given that motivation is a key factor in determining behavior, instructors who incorporate technology into the classroom must comprehensively understand the factors that motivate pupils to participate (Guo et al., 2012; Steel & Konig, 2006). The desire to employ technology from an extrinsic, device, and utility viewpoint has been the subject of much previous research works that have attempted to explain why people accept new technologies (Mohd et al., 2020; Razzaq & Samiha, 2018). Acts carried out in response to something external to the person are said to have extrinsic motivation. The assumption that the performance of an activity will lead to the acquisition of the desired outcome is a common factor contributing to extrinsic motivation (Teo et al., 1999). Extrinsic motivators are external to the individual and include the use of technology, excellent grades, and positive acknowledgment.

However, the significant role that intrinsic motivators play in customer adoption and use cannot be overlooked (Lee et al., 2005). Intrinsic motivation is exemplified by completing an action only owing to the activity's inherent interest, pleasure, or satisfaction. According to the study by Malone and Lepper (1987), intrinsic motivations for learning include being challenged, inquisitive, and having control. According to Katz et al. (1973), the theory of Uses and Gratification (U&G) is employed in the field of communication studies to explain why consumers consume different types of media. Such a method relates the usage of technology with consumers’ degrees of motivation. However, motivation alone creates a representation of technology users' needs which is only partly correct. Guo et al. (2012) combine the Means-End

Chain (MEC) method with the U&G theory to explain student technology usage motives as a series of interconnected and hierarchically organized parts.

In their study, they utilize MEC to explained that "using a certain information technology in learning should not be regarded a student purpose of technology use, but rather a means of achieving their needs" (Guo et al., 2012, p.31). In addition, researchers use a technique known as the Repertory Grid Interview Technique to identify why university students utilize technology for educational purposes. Researchers may assess the conceptual content and the relationships between ideas by having participants complete a triadic sorting of concepts and asking how and why questions during interviews (Guo et al., 2012). Guo et al. (2012) concluded that student aims and motives for using technology are interrelated and mutually influence one another.

In addition, Ciampa (2014) suggested that the use of technology in educational settings is tied to the individual goals of competition, curiosity, control, recognition, and cooperation. These personal goals may be achieved via the use of technology. These two types of motivators, intrinsic and extrinsic, can increase a student's motivation when combined in educational activities (Ciampa, 2014). Additionally, the use of technology is affected by both internal and extrinsic motivators (Lee et al., 2005; Sanchez & Hueros, 2010; Teo et al., 1999).

Expanding on the work done by Malone and Lepper, Ciampa's (2014) research integrates mobile learning with the concept of motivation. According to Ciampa (2014), the use of mobile technology for educational purposes includes not only the intrinsic motivators of challenge, curiosity, and control but also the extrinsic motivators of recognition, competition, and cooperation. Students may study at their own speed, using the intrinsic motivation that comes along with autonomy, thanks to apps for mobile learning. Students are responsible for their own education and make their own decisions on which learning tools to use. In addition, the

combination of an appropriate amount of challenge and timely feedback increases cognitive interest, which leads to an increase in the usage of home applications (Ciampa, 2014).

Furthermore, being addicted to smartphone usage could change students' behaviors; some can become more isolated, negatively affecting their social and interpersonal skills as smartphone usage increases (Mohd et al., 2020). A key concern is that it may lead some students to decrease their social activities, a primary contributor to depression. The increased use and reliance on phones may negatively impact their academic performance, happiness, and mental health. The results of the study by Mohd et al. (2020) demonstrated that 72% of student participants indicated they could not focus on class because of smartphone usage. Approximately 74% of participants indicated they did not have adequate time to study and upgrade technology skills on their smartphones. Another group (82.32% of participants) reported that mobile phone usage led to a drop in GPA. 79% of participants stated that using their phones interrupted and distracted them during lectures, and 85% of participants disagreed that their grades or GPA suffered because of increased time spent using their smartphones (Mohd et al., 2020). Teenagers addicted to their smartphones neglected their study time and routines (Mohd et al., 2020). In elaboration, it demonstrated that high dependence on smartphone usage could negatively affect students and their emotional well-being. The study by Mohd et al. (2020) indicated that few students reported using their smartphones for educational purposes but were using them for social purposes, which may have caused a decline in academic performance. Smartphones and poor time management skills contributed to the negative results on students' academic performance (Mohd et al., 2020). In addition, the excessive use of smartphones and other mobile devices may cause users some anxiety. Lastly, excessive smartphone use can cause insomnia,

anxiety, and depression when users do not receive messages or replies from peers (Kamibeppu & Sugiura, 2005).

Instructional Technology Integration Training

Education technology integration training is essential for teachers to understand how to operate and incorporate information and communication technology (ICT). As noted by Asnawi et al. (2018), such training will help create a more meaningful and authentic teaching and learning environment for teachers and students (Asnawi et al., 2018). Some challenges may prevent teachers from successfully integrating instructional technology, such as an overall lack of confidence in technology integration in the classroom. Other challenges were the resistance to change from a traditional teaching method to a modern technological method, the lack of effective instructional training, and the lack of technical support from educational stakeholders. For teachers with insufficient knowledge and skills to operate and integrate technology devices in the classroom, it was important to provide instructional technology training on how to use and incorporate technology devices into the curriculum.

There are also drawbacks to using technology in the classroom. Using instructional technology in the teaching process could add more work responsibilities. The additional work could become a struggle for teachers to meet the needs of every student. Moreover, utilizing technology might not be appropriate for all students; thus, training implementation must consider the student population. Djiwandono (2019) suggested that teachers continuously update their knowledge and skills in technology integration into the curriculum and classrooms to prevent themselves from being replaced by advanced digital technology. Furthermore, teachers should be open to learning a more modern teaching method to increase their knowledge in digital literacy to be fully functional in the digital era (Kurniawati et al., 2018).

Self-efficacy is an individual's perception of their capacity to successfully accomplish a certain activity or skill (Bandura, 1986; Zimmerman, 2000). With the prominence of technology in classrooms, several research works have focused on teacher attitudes and technological self-efficacy (Ertmer et al., 2012; Gokcek et al., 2013; Holden & Rada, 2011). These studies examine the relationship between teacher self-efficacy and various characteristics, including gender, teaching experience, frequency of usage, and training. Independent of the factors tested, self-efficacy beliefs have been demonstrated to affect instructors' classroom performance (Gokcek et al., 2013). Bandura (1986) states, "Teachers who passionately believe in their instructional effectiveness provide mastery experiences for pupils" (p. 140). Those plagued by self-doubt create classroom conditions that hinder pupils' feeling of effectiveness and cognitive growth.

Educational technology training is effective if it considers four integral components: compatibility, complexity, trialability, and observability (Kim et al., 2017). Compatibility refers to teachers' ability to see that the technology training corresponds to their beliefs and needs (Kim et al., 2017). It is the degree to which teachers perceive instructional technology as consistent with their teaching needs. Teachers who perceived instructional technology as compatible with their teaching styles wanted to complete the instructional technology training. Complexity refers to levels of difficulty the technologies have concerning mastery by teachers (Kim et al., 2017). It is the degree to which teachers perceive instructional technology as relatively difficult to understand and utilize (Pereira & Wahi, 2017). Perceptions of complexity did not influence teachers' decisions to complete the instructional technology training. Wang (2009) also had similar findings on the lack of a correlation between teachers' adoption of instructional technology and perceptions of complexity.

Trialability is the degree to which teachers perceive what they might experiment with instructional technology before deciding to incorporate it in the classroom. The study findings by Pereira and Wahi (2017) revealed that teachers' perceptions of trialability did not affect the decision and willingness to complete the instructional technology training. However, permitting teachers to try the instructional technology was a way to foster and increase the adoption of instructional technology.

Observability is the degree to which teachers perceive the results of instructional technology to be observed by others. Teachers' perceptions of observability did not affect decisions or willingness to complete the instructional technology training. In contrast, the results of two research studies by Bennett and Bennett (2003) and Tabata and Johnsrud (2008) revealed that when teachers thought they were being observed, they would attempt to adopt instructional technology. Although the adoption of Blackboard did not occur, some of its functions were used as part of classroom instruction (Bennett & Bennett, 2003). Therefore, even though observability can be high, it may not influence teachers' decisions or willingness to complete the instructional technology training (Bennett & Bennett, 2003; Tabata & Johnsrud, 2008).

Poor institutional support can hinder teachers from receiving effective educational technology training and cause them to have low confidence in integrating technology into classrooms (Asnawi et al., 2018; Djiwandono, 2019; Kim et al., 2017). Teachers must also have professional development support from their institutions to improve and foster enthusiasm and skills in instructional technology (Christensen & Knezek, 2017). Therefore, teachers may receive effective educational technology training to improve knowledge and integrate MTDs into classroom instruction (Burden & Kearney, 2017; Prasojo et al., 2018).

Possible Impacts of Integrating Mobile Technology

Effects of the use of technology in a classroom setting are discussed in this section, especially how MTDs and their learning apps may affect both positively and negatively teaching and learning environments (Habibi et al., 2019). Educational technology integration can increase teaching effectiveness by using technologies to deliver data and information related to lessons (Habibi et al., 2019). However, inadequate and ineffective instructional technology training can lead to teachers not being confident and not feeling comfortable integrating MTDs and their learning apps in the classroom (Ghavifekr et al., 2016). Using technologies in the classroom can help make students more engaged and motivated to learn. The online learning platform on MTDs led students to access class materials and assignments and communicate with teachers and peers to obtain better grades. On the other hand, students may utilize their MTDs and their apps for activities unrelated to classroom learning, such as, texting, emails, games, and social media, thereby disrupting classroom engagement (Amez & Baert, 2019; Raja & Nagasubramani, 2018).

Positive Aspects Relating to Using Instructional Technology

Technology integration can be helpful when implemented in an educational setting (Habibi et al., 2019). Integrating MTDs and their learning apps can help teachers and students achieve their instructional and learning objectives and goals (Habibi et al., 2019). The advantages of utilizing and incorporating MTDs and their learning apps into the classroom are to provide student-centered learning and teaching where students can be actively involved in their academic progress, also allowing teachers to function as facilitators in the classroom (Papadakis, 2017). Mobile technologies provide teachers and students with the flexibility to access digital course materials, chat, email, and online learning programs (Papadakis, 2017). Additionally, MTDs can benefit educators' efficiency in automating assessment distribution, collection,

evaluation, and documentation. Furthermore, teachers with favorable views toward instructional technology are more willing to incorporate MTDs and their learning apps into teaching and learning activities in the classroom. A positive view of technology usage in the classroom may be an intrinsic motivational value (Papadakis, 2017).

Overall, 67% of students declared that MTDs helped them feel comfortable while taking their courses and preferred them over their previous language-learning methods (Polakova & Klimova, 2019). Pechenkina et al. (2017) gave the example that students who incorporate MTDs and their learning apps for academic purposes demonstrated an average grade/percentage mark of 65.19%, compared to students who did not use MTDs, who averaged a grade mark of 58.16%. Therefore, students who used MTDs achieved a 7.03% higher than those who did not (Pechenkina et al., 2017). MTDs serve as a learning medium and can make students more excited to learn a language by increasing students' motivation to learn and teachers' motivation to teach (Kaliisa & Picard, 2017; Raja & Nagasubramani, 2018). For instance, online applications used in the classroom can comfort students who have just begun to learn Spanish by giving them a fun and practical way to learn. Learning through methods of applications online can decrease the cost of class materials (Kaliisa & Picard, 2017). Students had positive attitudes toward using MTDs and their learning apps to access learning management systems. These systems led them to access course materials, complete class assignments, and communicate with teachers and peers to obtain better grades. Furthermore, Kaliisa and Picard's (2017) study showed that students were willing to adopt and utilize MTDs and their learning apps for academic purposes if the MTDs were made easy to use through larger screens and high processing power. Lastly, if students are given the opportunity, the study demonstrated that adequate training to utilize MTDs and their learning apps could benefit instruction (Kaliisa & Picard, 2017).

A study by Ambrose and Palpanathan (2017) has revealed that there is effectiveness in using Computer Assisted Language Learning (CALL), specifically Google Documents (Google Docs), an online word processor, to improve students writing in learning a language. CALL is a collaborative teaching and learning method that helps learners to obtain their learning goals at their own pace and capacity. Computer technology is used in instructional methods at all stages, such as practices, feedback, and presentations. As part of the application of Google Drive, users can create spreadsheets, documents, and presentations which can all be shared with other online users. The researchers concluded that the usage of Google Documents is a tool that supports and increases students' knowledge in learning a language by allowing students to compare two or more documents which increases their understanding of grammar, punctuation, word choice, and how corrections are to be applied to sentences (Ambrose & Palpanathan, 2017).

The study involved 114 student participants from a Chinese Independent High School in Malaysia (Ambrose & Palpanathan, 2017). All the students interviewed for the study were 17-year-old-nonnative English-speaking who had learned English for at least three years in their high school before participating in the study. Questionnaires, pen, paper writing samples, and Google Docs writing samples from the students were the main elements of the research design (Ambrose & Palpanathan, 2017). The results show that the participants have a positive attitude towards using Google Docs in English learning. Out of the 114 participants, 96 of them (80%) believe that Google Docs is helpful in English writing class, 80.7% of participants agree that they enjoy using a computer to learn English, whereas 57.9 % of participants spend their time learning English when using a computer, 19.3% of the participants indicated that they do not like to use a computer in learning English, 42.1% of the participants do not learn English when using a computer but prefer to learn English from their books (Ambrose & Palpanathan, 2017).

The findings reveal that 84.4% of the participants recommend and encourage other students to use Google Docs for their English writing assignments (Ambrose & Palpanathan, 2017). 92 participants plan to continue to use Google Docs to write their English assignments. 90.8% of the participants believe that Google Docs made them become better writers. On the other hand, 17 students do not recommend other students to use Google Docs for their English writing projects (Ambrose & Palpanathan, 2017).

Negative Aspects of Using Instructional Technology

The study by Ambrose and Palpanathan (2017) that is related to using Google Docs in English writing class has a limitation to the study which is that small size was used, only 114 participants from one Chinese Independent High School in Malaysia, where English is taught and learned as a third language might not allow other researchers to generalize across other academic institutions. Hence, the findings may only apply to the study population (Ambrose & Palpanathan, 2017).

Insufficient instructional technology training and lack of content support were obstacles for in-service and pre-service teachers to incorporate MTDs and their learning apps into the curriculum (Atabek, 2019). The lack of practical instructional technology training prevented teachers from understanding how to integrate it into the classroom properly (Atabek, 2019). Similarly, a recent study in Turkey indicated the main problem with implementing instructional technology into the curriculum was the insufficient technology training for teachers (Özden, 2007). Some Saudi Arabian studies reported that the main factor that caused failure in using instructional technology was the lack of teacher training in the use of technology in teaching and the shortage of teachers. Inadequate and ineffective instructional technology training led to teachers not being prepared or confident to integrate MTDs and their learning apps into the

curriculum (Ghavifekr et al., 2016). Teachers must develop computer literacy skills and must be able to implement these skills into their curriculum and instructions (Newhouse, 2002).

MTDs and their learning apps can serve as an aid or a distraction for many students. In some circumstances, MTDs and their apps took the focus away from learning because some students were using them for texting, emails, games, and social media, thereby disrupting classroom engagement (Amez & Baert, 2019; Raja & Nagasubramani, 2018). Other studies also reported that mobile technology learning could be distracting (Ghavifekr et al., 2016). Privacy was also a concern when using MTDs and their apps, as personal information would have to be filled out and completed to access certain websites and content (Ghavifekr et al., 2016). Lecturers were concerned about their privacy and afraid that their confidential information would be exposed to students or other users, including hackers when engaging in mobile learning activities (Ghavifekr et al., 2016).

Overusing or being addicted to MTDs contributes to negative outcomes on physical health and emotional well-being, such as insomnia, anxiety, depression, and social isolation (Raja & Nagasubramani, 2018). Students may also experience social isolation and impaired social skills because of the interference of technology (Amez & Baert, 2019). Meanwhile, MTDs could impact access to the internet and cause problems for teachers giving foreign language classes on an online platform (Gafni et al., 2017). Slow MTDs can create loading problems due to limited memory on older devices (Ghavifekr et al., 2016). In addition, there is a chance that these MTDs could break down or have a drained battery during an assignment, which can impact the learning environment (Gafni et al., 2017). If students do not come prepared for class with their mobile devices, they could miss assignments, significantly impacting their studies.

Summary

There are both positive and negative effects to integrating MTDs and their learning apps into classroom instruction (Habibi et al., 2019). Teachers may have opposite experiences integrating MTDs and learning apps into the classroom. Using MTDs in a classroom can benefit teachers in terms of getting up-to-date study materials online, achieving daily teaching activities, and reaching instructional goals (Papadakis, 2017). It can also enhance student learning by getting more information about their studies, doing research, practicing the language with listening, reading, speaking, and writing activities, as well as proficiency. There are potential benefits for teachers in improving teaching quality with online additional language practice materials (Papadakis, 2017). However, the detriments of using MTDs include being a source of distraction for students because they might use them for recreation instead of their classroom lessons (Amez & Baert, 2019; Raja & Nagasubramani, 2018). Teachers may also have difficulty keeping students focused on their tasks, lectures, or in-class student discussions (Ghavifekr et al., 2016). Future research studies may need to focus on teachers' cooperation with implementing technology. There are some challenges with teachers having an inadequate or limited understanding of how MTDs and their learning apps can positively or negatively impact foreign language instruction. Educational institutions may also need to provide teachers with adequate education technology training to help them understand how to adopt technology and integrate it into class instruction. Lastly, utilizing MTDs and their apps in the classroom might be unpleasant. Still, teachers and students must find ways to manage MTDs for educational purposes and creativity.

CHAPTER THREE: METHODS

Overview

The purpose of this collective case study was to understand how college-level foreign-language instructors integrate MTDs and their learning apps into the foreign language curricula. The study took place in two colleges (College A and College B) located in the Mid-Atlantic region of the U.S. The participants for this study were 10 full-time, part-time, and adjunct instructors. The methodology for this study was qualitative and employed a collective case study as a research design. The data collection consisted of structured questions to interview the participants and obtained data or information relating to the research content domains. It also included document analysis and journal prompts to collect information from the participants. Chapter 3 provided an outline of the case study design, discussed the role of the researcher, and described the methodological approach of my research. The remaining sectioned outline procedures of participant selection, instrumentation, and data collection. The chapter concluded with a review of the significant points and a plan for data analysis.

Research Design

This research was a qualitative research study to gain a deeper understanding of the limitations of educational technology training used in classrooms that taught foreign languages and investigated the research problems. Such an approach was applied to inform theories, models, or new concepts (Crabtree & Miller, 1999; Creswell & Poth, 2018). A qualitative study was appropriate for this project because it helps understand the feelings, values, experiences, and perceptions of the foreign-language instructors who are the participants. It also captured the participants' language to describe their experience with and perceptions of integrating MTDs and their learning apps in the classroom.

Specifically, a collective case study applied in this research project, as it enabled the researcher to gain a deeper insight (Crabtree & Miller, 1999; Creswell & Poth, 2018) into the importance of MTDs for teaching and learning in foreign-language classes. In addition, this research examined how instructors improve their skills in integrating MTDs and their learning apps in the classroom and analyzed the instructors' experiences and perceptions (Crabtree & Miller, 1999; Creswell & Poth, 2018). A case study was appropriate for this research because it allowed for information to be collected through interviews and survey methods from 10 college foreign-language instructors who taught at two institutions.

Although Yin (2018) did not indicate a particular range of numbers of participants in his publication, he recommended that qualitative researchers focus on collecting and analyzing information on various case aspects. In contrast, a sample size of 20 to 40 participants should be sufficient to achieve data saturation for the analysis of data and information across research sites (Hagama & Wutich, 2017). However, researchers could still reach saturation with fewer participants in qualitative research (Boddy, 2016). For example, when researchers repeatedly had the same comments, that indicates data saturation. Then, it was time to stop collecting information and begin analyzing the data that has been collected (Boddy, 2016). When conducting a case study, typically it is involved a sample of one. In the case of multiple-case studies, it is important to limit the number of cases to three or four to ensure thorough analysis and avoid overwhelming the researcher (Baxter & Jack, 2008). Research illustrated that at least 10 participants were enough in cases where data saturation could occur among a relatively homogeneous population (Boddy, 2016). Therefore, samples of 10 were utilized in my research study since there were a limited number of college-level instructors who taught foreign language courses at the two research sites.

Referring to the study by Stake (1995), Hyett et al. (2014) stated that the case study was a research design used to investigate and analyze a single or collective case to reflect the phenomenon's complexity. Qualitative case study researchers could consider the emerging differences and similarities in cross-case comparisons using the case study design (Crowe et al., 2011). According to Tellis (1997), the earliest use of a case study appeared in Europe, specifically in France. The case study methodology in the United States was associated with the Department of Sociology at the University of Chicago (Tellis, 1997). Tellis (1997) referred to Hamel et al.'s (1993) study from the early 1900s to 1935. The University of Chicago was best known for its case study research on immigration. The study focused on different aspects of immigration-related to poverty, unemployment, and other problems suited for a case study design (Tellis, 1997).

The case study model was strongly associated with sociology until 1935 (Tellis, 1997). After 1935, researchers from other disciplines petitioned case study researchers to make the design more scientific. Accordingly, it meant providing quantitative measurements to the case study design and analysis (Tellis, 1997). In 1935, a dispute ensued between a Columbia University professor (scientific method observer) and the University of Chicago (Tellis, 1997). The Columbia professor won the debate, and the case study methodology started declining (Tellis, 1997). In the 1960s, researchers had concerns about the limitations of quantitative methods and began to focus more on case study methodology again. Tellis (1997) referred to the emergence of the grounded theory developed by Strauss and Glaser (1967). The grounded theory and some studies accelerated the renewed use of case study methodology (Tellis, 1997). According to Tellis (1997), the methodology was criticized; researchers did not believe a sole

case study is generalizable to other studies. Hamel et al., (1993) and Yin (1984, 1989a, 1989b, 1993, 1994) argued:

> The relative size of the sample, whether 2, 10, or 100 cases were used, did not transform a multiple case into a macroscopic study. The study's goal should establish the parameters, and then the parameters should be applied to all the research. This way, even a particular case could be considered acceptable, provided it met the established objective. (Tellis, 1997, p.4)

There are five components of the case study design: study questions, study propositions, the case for a case study, linking data to propositions, and criteria for interpreting the strength of a case study's findings (Yin, 2018). In the first component, study questions in a case study were formulated to answer how and why questions instead of who, what, and where ones (Yin, 2018). Yin (2018) also offered three tips on creating and developing case study questions that are relevant and fit a research topic of interest. Researchers should not be concerned about specific research topics but use the literature to focus or limit their research interest to a critical topic (Yin, 2018). Researchers should also carefully examine the key studies on their topic of interest and identify questions for future research studies (Yin, 2018). Lastly, researchers must review and examine other studies on the same topic to improve potential questions (Yin, 2018).

In terms of the second component, propositions were those statements that began with how and why, which helped guiding researchers to something that should be studied (Yin, 2018). The how and why questions in the case study design reflected what researchers were interested in understanding with their studies, directing them to the appropriate study method (Baxter & Jack, 2008). For instance, Yin (2018) stated, "How and why do organizations collaborate with one another to provide service?" (p. 167). The proposition in the example helped indicating what

theoretical issues to explore and allowed researchers to search for relevant supporting evidence (Yin, 2018).

The third component, a problem or issue in the case study design, was the specific case (Yin, 2018). Two steps to consider when dealing with the cases were defining and bounding the case (Yin, 2018). Defining the case involved gathering information about an individual, event, entity, school, organization, decision, community, or program (Baxter & Jack, 2008; Yin, 2018). The information was collected through various data collection methods, and the case got bounded. Bounding the case was how researchers could identify and decided the scope of their data collection while connecting it to the case, proposition, and research question (Baxter & Jack, 2008; Yin, 2018). The fourth component, linking data to a proposition, represents the data analysis techniques in the case study (Yin, 2018). The researcher combed through the case study data to reflect on the proposition (Yin, 2018).

Regarding the fifth component, as Yin (2018) explained, "The more rivals that have been addressed and rejected, the stronger will be your findings for interpreting the strength of the case study" (p.34). Out of the five components, the first three components helped researchers defining their research questions and led them to the data relevant to the key topics of their studies that should be collected (Yin, 2018). The last two components logically linked the collected data to the propositions and findings, leading to the case study's data analysis (Yin, 2018).

The researcher employed a collective case study design because it allowed for an in-depth and detailed examination of college foreign-language instructors' perceptions of integrating MTDs in foreign-language classrooms. The case study also helped investigating and examining potential problems or obstacles that prevented college foreign-language instructors from being confident in operating and integrating MTDs and their learning apps into curriculum

instruction. A case study was an intensive investigation of single or multiple cases, which allowed the researcher to examine in-depth data and information related to variability (Heale & Twycross, 2018). Generalization of results, from either single or multiple designs, was made to the theory and not to populations (Yin, 1994). However, a challenge relating to the case study was that the researcher might be limited to a single-case design because of the limited availability of cases (Tellis, 1997).

Research Questions

Central Research Question

What are the lived experiences of foreign language instructors implementing mobile technology devices and their learning applications in their curriculum?

Sub-Question One

How does foreign language instructor training influence the preparedness and willingness of foreign-language instructors in integrating MTDs and mobile applications within the curricula to enhance self-efficacy among students?

Sub-Question Two

What are the barriers to the integration of MTDs and mobile applications by foreign-language instructors in the curricula as a way of enhancing self-efficacy?

Sub-Question Three

What is the perception of foreign-language instructors on the value of MTDs and mobile applications on enhancing self-efficacy among students?

Setting and Participants

The research locations were chosen because the respective colleges had a large pool of international students. College A was specifically suitable for this study because the 10,000 undergraduate students across several campuses needed post-secondary general education

completion as part of the requirements. Additionally, it offered students seven foreign-language courses: Chinese, French, German, Italian, Japanese, Korean, and Spanish. On the other hand, College B offered eight language courses for students: Chinese, French, German, Linguistics, Spanish, English as a second language, Arabic, and American sign language. Its large pool of students and diversity policy attracted many international students who could be part of future research studies.

Site

I used codes for the two research sites, for example, "College A and College B." College A, located in the Mid-Atlantic region of the United States in Virginia, is accredited by the Southern Association of Colleges and the College Board and the State Board for Community Colleges approves their curricula. College A offers students seven foreign-language courses: Chinese, French, German, Italian, Japanese, Korean, and Spanish. The structure of the foreign-language department includes undergraduate beginner, intermediate, and advanced levels in speaking, reading, and writing. Leadership of College A is committed to shared governance, a formal partnership between the administration and constituencies of faculty, support staff, and students. The President is responsible for the administration of the College A. Any authority or responsibility or duty granted to or imposed upon the President of the College A may be delegated to another person or persons on the faculty or staff of the College. Approximately 60 academic programs including foreign language department. There is a total of 35 foreign language teachers: 10 full-time, 10 part-time, and 15 adjunct. Among the reasons for the selection of College A is that it serves approximately 10,000 undergraduate students across several campuses and that foreign-language courses are part of students' post-secondary general education completion requirements. Such a requisite created a larger pool of potential foreign-language instructor participants. Second, there were limited numbers of primary research studies

relating to integrating MTDs and their learning apps for foreign-language teaching in the Mid-Atlantic region, which allowed for further investigation and research on this topic.

College B is also located in the Mid-Atlantic region of the United States and Virginia. College B is a private university accredited by the Southern Association of Colleges and Schools Commission on Colleges to award undergraduate and graduate degrees. The modern language department offers eight language courses for students: Chinese, French, German, Linguistics, Spanish, English as a second language, Arabic, and American sign language. Leadership structure of College B is similar to leadership structure of College A. Leadership of College B is comprised of shared governance, a formal partnership between the administration and constituencies of faculty, support staff, and students. The President is responsible for the administration of the College B and 10 executive leadership members who promote excellence in academics, student life, enrollment, communications, community outreach, diversity, and financial health. There were 21 resident faculty members at foreign language department (10 of which are adjuncts). There were approximately 75,000 students enrolled in College B; 45,000 students are enrolled in undergraduate programs and 30,000 students in graduate programs. Similar to the characteristics of College A, College B has foreign language classes, is accredited, and has a large pool of potential foreign language instructor participants.

Participants

Purposive sampling was used in this research study. I assigned codes for names of the participants and replaced names of the participants with codes. For example, I used "W1_French" for Susanna who is a French instructor. The participants were foreign-language instructors who were full-time or part-time faculty members at the community college. Purposive sampling was a technique used in qualitative research studies to select participants who had

experienced a phenomenon of interest (Palinkas et al., 2015). There was a total combination of 10 participants who were full-time, part-time, and adjunct foreign-language instructors teaching at the two colleges (College A and College B) in the Mid-Atlantic region of the U.S. All participants had at least one year of experience in teaching foreign languages, male and female genders, any ethnicity, and any religious background, ages between 27 and 67 years old, and able to participate in an interview session. The interview with each participant lasted approximately 40-60 minutes on TEAMS or Zoom. These variables informed the decision on foreign language instructors to select from two colleges to participate in the study.

Recruitment Plan

The recruitment process commenced with the dispatching of the recruiting email (Appendix C) to potential participants, which incorporated both the screening survey document and informed consent. The intended participants were informed about the study's objectives and were provided with a chance to review the interview questions, journal prompts, and the entire research procedure in advance. Drawing upon the guidelines set by Creswell and Poth (2018), a sample size ranging between five and 25 individuals is deemed sufficient for uncovering prevalent patterns and themes in a given study. Given the potential participant pool of approximately 25 from College A and around 20 from College B, the target was set to secure a sample size of at least 15 participants. It should be noted that, if the recruitment process yielded fewer than 15 participants, the final number would be reported transparently and accurately Creswell & Poth (2018). The participants selected fall under a purposive sample category. Their selection is rooted in their roles as foreign language educators, likely possessing expertise in integrating mobile technology devices and relevant educational apps into the teaching curriculum. This method of sampling is known to enhance the quality of data collected, as stated

by Creswell & Poth (2018). Participants were reminded that their participation was entirely optional. They were given access to a preview of the study procedure and asked for their permission (Appendix D).

Research and Positionality

Educators, students, and curriculum designers currently live in a period of technological complexity regarding education. Teachers of foreign languages are incorporating technology to improve student performance and, ultimately, to influence student outcomes. Modern instructors are expected to utilize technology to promote student engagement, provide interactive experiences, and offer students the opportunity to think more critically. I believed that educators' technological self-efficacy was a major aspect in training and inspiring future teachers to apply innovation in the classroom. In this study, the focus was to demonstrate the technological self-efficacy of foreign-language teachers and their propensity to adopt and integrate mobile apps and gadgets into their instruction.

Specifically, this study was intended to help understand issues related to instructors' and students' technological self-efficacy and attitudes about technology use and technology use in the classroom. I was aware that there were still obstacles between effective instructional technology integration and everyday digital usage. To harness the power of information technology to improve classroom instruction and, ultimately, student learning outcomes, the researcher believed it was necessary to investigate the role technology self-efficacy and attitude toward technology use played in motivating student and teacher personal use of technology in the educational setting. Moreover, the researcher attempted to explore the disconnect between meaningful personal technology usage and its incorporation into classroom education. I wanted to develop a comprehensive understanding of the views of foreign-language teachers about

technology usage and its crossover into education by developing a multidimensional portrayal that was more reflective of our increasingly complicated times.

The research's analytic process mirrored my experiences with foreign-language acquisition challenges. In terms of language, I had a diverse background, with my fondest memory being the experience I had with my mother, from whom I learned the Thai language. Remembering their informal learning sessions for the Thai language triggers the lingering of many questions in my mind. Notable amongst them was the alignment of the learning process with technology. Technology was not employed even once. If we had incorporated technology, could the learning experience have been better and more engaging? Pragmatism features freedom of choice, and in doing this project, I was interested in finding an outcome, albeit with practical interactions in a social context (Iphofen & Tolich, 2018). As a pragmatic case study researcher, I was interested in knowing people's subjective experiences with foreign language acquisition. Using the epistemological approach enabled me switch positions from being their mother's student to being interested in getting first-hand information from instructors of foreign languages. I believed in doing this project and deleted the illusory mindset and learned the practicality of self-efficacy and its benefits to foreign language acquisition.

Interpretive Framework

In this case study, I employed the pragmatism model. Pragmatism aligned researchers with a mindset of finding solutions and best practices for social problems. Pertinent to this research, I believed that adopting technology and acquiring self-efficacy skills in using technology came in handy for foreign language acquisition. According to Kelly and Cordeiro (2020), the notable principle of pragmatism was its focus on practical understandings of world issues by connecting knowledge and actions in a particular context. In their case, I had

experienced the struggle of learning a foreign language. In elaboration, the struggle influenced their perspective on the most employable approach to improving such an experience. Including technology in foreign language teaching did not fully solve the problem. From their school of thought, I believed that self-efficacy took it a notch higher by eliminating the impediments to the use of technology in the classroom. A pragmatic approach was necessary for integrating technology in the learning process. It reshaped instructors' perception, overcame obstacles to using technology in the classroom, and enabled learners and teachers to collaboratively integrate various forms of technology to improve foreign language acquisition.

Philosophical Assumptions

As part of the dissertation, I was investigating the viability of adopting a structured approach to curriculum-technology integration to foster self-efficacy. Before getting there, I must identify the issue under investigation in more detail. As such, I had decided to investigate some theoretical methodologies or approaches to qualitative research to better direct their efforts. When conducting a qualitative study, researchers implicitly accepted its underlying philosophical assumptions while bringing their worldviews to the table, influencing the course of their research. I used ontological, epistemological, and axiological viewpoints in my work.

Ontological Assumption

Saunders et al. (2018) asserted that ontological assumption refers to the nature and features of reality. In this study, the researcher embraced the concept of numerous realities and report on these realities by examining diverse types of evidence from other persons' viewpoints and experiences. For this study, ontological assumption was adopted to obtain the natural reality as much as possible. Notably, case study involving 10 participants was conducted, all of whom were foreign language instructors. The focus on using the case study of the participants was to

embrace the natural reality of how foreign instructors used technology in their professional duties. To obtain multiple realities, the researcher formulated questions for all the participants with the expectation that each had their answers. The variation and diversity of the responses were proof of multiple realities. The participants shared their perspectives while using different words and phrases to explain their experience. Thus, the different perspectives and views from the participants mirrored the characteristics of the ontological assumption.

Throughout the case study the expectation was that the course would not remain the same. To stick to the frames and tenets of the ontological assumption, I took note of the evolving themes from the perspectives of the participants. In so doing, the findings included the multiple realities of foreign language instructors' experience with technology in the location of the study. Also, the methodology of the case study presented two study locations, College A and College B. Therefore, the viewpoints of the participants from each of the two institutions were expected to be diverse with different perspectives that mirror the desired ontological assumption.

Epistemological Assumption

I should attempt to get as close as possible to the study participants. Subjective evidence was compiled based on human perspectives from field research. To give a philosophical basis for deciding what kinds of knowledge are conceivable and how to assure that they were sufficient and authentic, epistemology's primary objective is to fulfill its name: to study the theory of knowing.

The constructionist epistemological viewpoint was used as the methodological position. According to Crotty (2003), the term "constructionism" referred to the view that all knowledge and, by extension, all meaningful reality as such was contingent upon human practices, being constructed in and out of interaction between humans and their environment and developed and

transmitted within a fundamentally social context. Additionally, the term "constructionism" referred to the view that all knowledge and, by extension, all meaningful reality as such was contingent upon human practices (Crotty, 2003). The term “practice-based constructionism” was used as a synonym for "constructionism" (Crotty, 2003). As a direct consequence of it, meaning was not so much found as it is manufactured. In the case of this study, the researcher stayed with the epistemological assumption in two ways.

Firstly, it was through the interaction with the target group, who in this case were the foreign language instructors. To obtain justifiable knowledge that related to foreign language instructors’ use of technology, I sought to get close to them as much as possible. I positioned my research’s data collection process in a manner that obtained first-hand information with the participants in an interactive way. It involved obtaining their subjective experiences with the use of technology in their daily professional duties.

Secondly, the interaction with the foreign language instructors was in their workstations. To adopt better epistemological views, it was worth the time of a researcher to understand the normal situations of the participants. In this case, the context for the foreign language instructors could be at their workplaces. By spending more time with participants in their usual working contexts, I obtained justifiable knowledge and claims that are pertinent to my study questions.

Axiological Assumption

It was important for me to borrow from the axiological assumption as much as possible. I found this project appealing. From a personal perspective, I had once been a student of a foreign language; even though in informal settings where I learnt Thai from my mother. As a woman and someone who understood the struggles of acquiring a foreign language, I believed that the inclusion of technology can come in handy. A major development in today’s use of technology

was the age variation between instructors and students. I was of the opinion that in the same way institutions had channeled resources to make students more acquainted with technology, there was a need to have the same arrangements for the instructors.

In its entirety, teaching had to be interactive and engaging. Personally, I believed technology could make the teaching and learning processes more interactive and engaging of there was utmost self-efficacy. I intended to interact with the participants in the case study and learned how the lack of self-efficacy in their use of technology was affecting their professional outcomes. Also, I seek to understand their viewpoints on the difference between the lack of self-efficacy in the use of technology and the lack of technology in the teaching of foreign languages.

Researcher's Role

It was critical to comprehend my role as the researcher in this study. My past and current work experience as an independent Thai language instructor influenced this study. My interest in Thai language being taught as a foreign language in the United States stems from my mother being a Thai government employee public school teacher. I have been an independent Thai language instructor for over nine years for local private language schools in Northern Virginia, teaching adult learners who are at the beginner, intermediate, and advanced level of Thai language. I am also a Thai language curriculum developer, following a Christian worldview, which means that my interpretation of the world is influenced by Christian beliefs, faith, and the teaching of Christ. I utilize MTDs (iPhone, laptop, iPad) and their learning apps (TEAMS, Zoom, google translate). In my own experience, usage of MTDs helped teachers accessing teaching activities, reach instructional goals, and served as a learning medium to assist students with language lessons while increasing their learning motivation.

My bias was that I believed most of foreign language instructors were inadequately prepared in college-level foreign language instructions. In addition, I believed that college educational leadership programs did not effectively prepare them. Such type of bias and assumption might affect my data and analysis (Hajar, 2021) as I looked for specific patterns and themes regarding the idea. Thus, it might potentially lead me to miss other relative and relevant information that could be beneficial to my research study. To mitigate my bias, I structured interview questions objectively so they would not allude to any particular attitudes, themes, and/or disposition that could reflect poorly on the purpose of my research study. Moreover, I established a rapport through certain interview questions that allowed the participants to have comfortability and a sense of control. To do it effectively, I mitigated my bias by using a reflexive journal (Appendix H). Mitigating biases was an important step in conducting research studies to ensure that my assumption did not influence the methodology of the study (Hajar, 2021). The reflexive journal was not used to capture assumptions and thoughts that occurred during the study (Hajar, 2021).

Procedures

To complete the data collection process, once my IRB was approved (Appendix A) by IRB Liberty University, I requested potential participants' email addresses from the faculty chairs/directors of the language departments at the two sites (College A and B). Then, I directly sent potential participants the recruitment email (Appendix C) attached with the screening survey for participating in the research study (Appendix I) and informed consent document (Appendix D). The purpose of obtaining IRB approval was to document the ethical design of the studies and to ensure all participants of the research studies are safe and clearly informed about the studies (Creswell & Poth, 2018). To avoid any concerns related to the case study approach and to gain

reliability, the methods, procedures, and data collection approaches and techniques must be transparent and explicit (Yin, 2018). All personal information of the participants was kept confidential. Once potential participants received and reviewed the three documents (Appendix C, D, I), they had to send email, along with their completed screening survey documents (Appendix I) to my Liberty University email address within 3 days after receiving the recruitment email attached with the screening survey document (Appendix I) and informed consent (Appendix D), if they are interested in participating in my research study, so I could determine their eligibility to participate in my research. I then informed them through their work email addresses if they were qualified and approved to participate in my research.

Once they received an email message from me stating that they were qualified and approved to participate in my research study, they had to review the informed consent document and signed and returned it to me at [redacted]@liberty.edu within three days after they had been notified that they were approved to be a participant of my research study. Doing so would indicate that they had read the consent information and wanted to take part in the study. At this time, the participants had to review the documents and be able to have any questions about the informed consent and, or other elements of my research study answered by me.

The participants completed and returned the journal prompts (Appendix F) along with their foreign language class syllabi to my Liberty University email within seven business days after signing their informed consent document. I also sent an automated interview scheduling calendar to the participants work emails after I received their completed informed consent documents (Appendix D). The participants then scheduled potential days and times for completing their interviews on TEAMS or Zoom, using structured interview questions (Appendix G). Interviews were approximately 40 to 60 minutes in length, and should not exceed

90 minutes, in consideration of other possible commitments the participants might have (Furgerson & Jacob, 2012). The interviews needed to be completed within two weeks of finalizing the informed consent documents (Appendix D). The participants reviewed their transcripts that were sent to their email to obtain feedback about the effectiveness of the interview questions. By having the participants review their interview data, the reliability and credibility of data would increase, and the chance of bias and errors would also be minimized (Treweek et., 2018).

Data Collection Plan

Data for my research had been collected from journal prompts, five foreign language course syllabi, and 14 structured individual interviews. Structured interviews tended to be easy to replicate as a fixed set of questions were utilize, which were not difficult to quantify, and it was easy to measure reliability (Yin, 2018). Structured interviews were quick to conduct. Many interviews could occur within a short amount of time (Yin, 2018). To help researchers in collecting raw data from the interviews, interview questions should be open-ended and non-threatening (Yin, 2018). Document analysis, reflexive journal, and additional sources of data could increase validity and quality of research studies (Yin, 2018). A case study database was created using Microsoft Word and used throughout the collection process to manage and organize the data (Yin, 2018). Creswell and Poth (2018) and Yin (2018) suggest the case study database could help separate the raw data from bias and can increase the reliability of research studies.

Journal Prompts Data Collection Approach

I developed five questions for the journal prompts (Appendix F) to obtain insights from the participants. The journal prompts (Appendix F) were provided to the participants after they

completed and returned their informed consent to me at [redacted]@liberty.edu. The participants were required to complete and return the journal prompts to my Liberty University email address within seven days after they submitted their completed informed consent documents along with their individual syllabi to me at [redacted]@liberty.edu.

I created the journal prompts which would discuss the experiences of foreign-language instructors with integrating MTDs and their learning apps into their instruction. The journal prompts were designed to focus on the strengths and weaknesses of using technology to teach foreign language classes to address face validity. Face validity was the measurement of the intended construct in the view of the intended participants (Kennedy et al., 2019). For content validity, the journal prompts covered all relevant parts of the subject it targets to measure. In this study, the journal prompts aimed to ask participants to provide the five responses that reflected their experiences, perceptions, or values on integrating mobile technology into their instruction. The journal prompts also considered the participants' strengths and weaknesses when using technology as a tool for teaching language classes. Lastly, it addressed what improvements or enhancements participants believed could be made to technology integration in the classroom. The journal prompts that were used in this study reflected teachers' curriculum content on the actual usage of MTDs in their curriculum further supplementing collected data.

Journal Prompts

Five journal prompts were created and piloted them along with the interview questions, to three foreign-language instructors at a local private language school in Virginia. These journal prompts further helped in collecting relevant data to understand the study questions. The five prompts focused on assessing the importance of using MTDs, instructors' self-efficacy as a foreign-language teachers, how instructors adapt their teaching methodology to use MTDs,

potential challenges of integrating MTDs, and approaches instructors use to improve or enhance their skills integrating MTDs. These journal prompts are briefly detailed below.

Journal Prompt #1. How do you describe the importance of using MTDs and their learning applications in the foreign-language curriculum as a foreign-language instructor? The prompt was used to assess CQ and SQ. MTDs could enhance students' and teachers' performance by continuously facilitating and using MTDs as a course delivery method (Klimova, 2019). García-Martínez et al. (2019) referred to Milošević et al.'s (2019) study, which indicated that integrating technology into classroom instruction benefits and improved the overall quality of the teaching process. In that study, technology was part of the pedagogical approach and was used as a tool to improve curriculum instruction (France et al., 2020).

Journal Prompt #2. How do you describe your self-efficacy as a foreign-language instructor to integrate MTDs and their learning applications into the classrooms? The prompt was used to explore CQ. Teachers' perception and confidence level contributed to their competency in incorporating MTDs into the classroom (Wyatt, 2018). Meanwhile, using the TPACK model in technology integration could increase teachers' self-efficacy and technology adoption (Durak, 2020). Teachers with high technology self-efficacy tended to achieve more effective technology integration in the classroom than those with less technology self-efficacy. Teachers needed to believe in their ability to use technology to have more confidence in integrating technology into classroom instruction (Durak, 2020).

Journal Prompt #3. How do you adapt your teaching methodology to use MTDs and their learning applications for teaching foreign language classes as a foreign language instructor? The prompt was used to assess SQ1. Teachers should be open to becoming more familiar with technology and integrate new pedagogical approaches in language learning. (Niess, 2017).

Journal Prompt #4. How do you describe potential challenges of integrating MTDs and their learning applications into the curriculum as a foreign-language instructor? The prompt was used to explore SQ2. Teachers' lack of technology training challenged the integration of technology into the classroom (Christensen & Knezek, 2018). Teachers must be more confident about incorporating technology into the curriculum instruction to become more effective when using technology to deliver instruction. Inadequate technology integration training caused difficulty for teachers to use technology devices, which impacted their ability to deliver instructional lesson plans in the classroom effectively (Raman et al., 2019).

Journal Prompt #5. How do you improve or enhance your skills integrating MTDs and their learning applications into the curriculum as a foreign-language instructor? The prompt was used to assess SQ3. Teachers' TPACK was essential for adopting technologies in curriculum instruction (Alquarshi et al, 2016). However, teachers might take time to embrace technology integrating into classroom instructions, depending on how they perceived technology and whether they were willing to accept it (Baturay et al., 2017). Ahmadi (2018) suggested that having adequate education technology training helped teachers effectively introducing MTDs in English-language classrooms.

I created these journal prompts and piloted them, along with the interview questions, to three foreign-language instructors at a local private language school in Virginia. None of these instructors were eligible to participate in the research study after participating in the pilot test. Moustakas (1994) stated that a pilot testing process can ensure each item on the survey was not leading and captured information and data relating to integrating mobile technology devices for teaching foreign language classes.

Face validity and content validity were used to examine items on the survey instrument to ensure they measure what they were supposed to (Rubio et al., 2003; Saiful Bahry et al., 2020). Almanasreh et al. (2019) also mentioned that "Content validity provides evidence about the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose" (p. 241). Furthermore, to determine if each item on the survey had content validity, a panel of experts must evaluate instrument elements and rate them based on their representativeness and relevance to the content (Almanasreh et al, 2019). The journal prompts had high face validity and high content validity because each item on the survey assessed what it claimed to, and each item was relevant to the overall content of the research study.

Journal Prompts Data Analysis Plan

Analyzing the data from journal prompts, using both deductive and inductive coding approaches, enhances our comprehension of instructors' perceptions regarding technology integration in their foreign language curriculum. The use of deductive coding aids in structuring the analysis according to predetermined categories, ensuring alignment with the original research objectives. Conversely, inductive coding facilitates the identification of new and unforeseen themes arising from instructors' input, thereby offering more comprehensive and detailed insights. The combination guarantees a holistic grasp of instructors' perspectives encompassing expected as well as innovative aspects of technology implementation in their teaching practices.

Document Analysis Data Collection Approach

Document study, also known as document analysis (Russell & Gregory, 2003), was a systematic process used to review and evaluate documents, texts, or printed materials (Bowen, 2009). It helped me gain an understanding of the data contexts (Bowen, 2009). In this study,

upon potential participants' completion of agreement to participate in the research, they also had to provide the researcher with their foreign language course syllabi. I reviewed the syllabi by utilizing the deductive coding and inductive coding approaches of thematic analysis. The deductive coding approach helped me understand how the pre-determined categories related to one another and pattern codes (Bowen, 2009). While the inductive coding approach allowed me to collect data, analyze patterns in data, and generate themes from the data (O'Leary, 2014).

Researchers must evaluate the original goal and purpose of documents, e.g., target audience, materials or tools that are used for teaching and learning (Bowen, 2009).
It was important to determine latent content which refers to the style, tone, facts, or agenda that appear in the document (O'Leary, 2014). In addition, researchers should assess the completeness of documents with respect to how comprehensive, relevant, and selective the data were (Bowen, 2009). There were reasons why researchers used document collection approach and analysis in their studies. First, document analysis tended to be practical and manageable resources. Documents came in a variety of forms that made documents a reliable source of data and accessible to get and to be used in the research (Bowen, 2009). Bowen (2009) states that "Documents are stable, non-reactive data sources, meaning that they can be read and reviewed multiple times and remain unchanged by the researcher's influence or research process" (p. 31).

Documents also provided background information, broad coverage of data, supplementary research data, and made document analysis a benefit method for the research (Bowen, 2009). On the other hand, disadvantages of using documents as a data collection approach were that documents might not be able to provide necessary information that was required to respond and answer research questions (O'Leary, 2014) because some documents

might contain a small amount of useful data that was relevant to research questions (Bowen, 2009). Some documents might be incomplete, unavailable, or not accessible (Bowen, 2009).

In addition, it might be the potential presence of biases from researchers that were then incorporated into documents (O'Leary, 2014) because the subjectivity of documents and how researchers developed an understanding of the document data affected the credibility of the studies (Bowen, 2009). Document analysis was often used in combination with other qualitative research methods as a means of triangulating the combination of methodologies in the study of the same phenomenon (Denzin, 1970). The qualitative researcher was expected to draw upon multiple sources of evidence; that was, to seek convergence and corroboration using different data sources and methods (Denzin, 1970).

Document Analysis Data Analysis Plan

The analysis of documents provided by the participants helped identify strategies related to the integration of mobile technology devices into their curricula. By organizing the textual contents of the syllabi according to themes as recommended by Yin (2018), we can effectively interpret the data, emphasizing patterns and similarities. The thematic framework allows us to establish connections among various aspects of the syllabi, particularly those related to incorporating mobile technology devices in foreign language instruction. It reveals the subtle impact MTDs have on shaping and enhancing the curriculum, ultimately deepening our comprehension of modern pedagogical approaches.

Individual Interviews Data Collection Approach

A structured interview was used as an instrument for this research. The structured interview aimed to provide all participants with the exact same context of questioning (Creswell, & Poth, 2018). I formulated 14 structured questions based on the research questions. As

indicated on the data collection section, I also sent an automated interview scheduling calendar to the participants' work emails after I received their completed informed consent documents. The participants could then schedule potential days and times for completing their interviews, but the interview must be completed within two weeks of receiving the completed informed consent. To achieve internal validity—defined as the observed or study results that represented the truth in the study population that was being studied (Hayashi et al., 2019)—the interviews were audio recorded.

Prior to commencing with the open-ended individual interview question number 1, I had each participant introduce themselves and explain their teaching position at their academic institution. Collecting information such as name, age, ethnicity, years of teaching, languages they taught at their academic institutes and had the participants do a limited self-introduction were designed to establish a rapport and make the participants felt comfortable with their interview process. The 14 questions were indicated below.

Individual Interview Questions

1. Please describe your experience teaching foreign language with the integration of MTDs through your current teaching position. CRQ

2. What kind of technology integration strategies, methods, or techniques are most important and most effective for you to use in teaching your foreign language class? SQ1

3. How do you describe the importance of using MTDs and their learning apps in foreign language curriculum? SQ1

4. How do you describe your self-efficacy as a foreign-language instructor to integrate MTDs and their learning apps into the classroom? SQ1

5. Please share any challenges you may have experienced when operating and integrating MTDs and their learning applications into the classroom? SQ2

6. What are the perceived weaknesses in using technology integration for teaching your foreign-language classes? SQ2

7. What are the potential challenges of integrating MTDs and their learning applications into your foreign language class instruction? SQ2

8. How do the challenges of integrating MTDs affect your class instruction, values, and students' learning? SQ2

9. Please share any benefits you experienced when operating and integrating MTDs into the classroom? SQ3

10. What are the perceived strengths in using technology integration for teaching your foreign language classes? SQ3

11. How do you improve or enhance your knowledge and skills of integrating technology into your classroom? SQ3

12. What other competencies are beneficial when implementing MTDs and their learning applications to teach foreign-language classes? SQ3

13. How does your organization provide support for technology integration into your classroom? SQ3

14. If you were the leader of your organization, what would you do to improve and enhance teachers' knowledge and skills in integrating MTDs and their learning apps into foreign language classes? SQ3

Question one was a central question to set the tone and made the participants feel more comfortable with the interview. The participants expressed their experience of integrating MTDs

and their learning apps into their foreign language curriculum. The interview question was straightforward and served to build a rapport between the participant and the researcher (Hakansson, 2019). There were both positive and negative perceptions towards technology integration in the classroom among teachers who taught English as a Foreign Language course or EFL (Alghamdi, 2022). Some teachers believed that mobile-assisted language learning enhanced teaching and learning EFL courses. While some teachers still face challenges because they did not have a sufficient level of knowledge and skills to incorporate mobile-assisted learning into foreign language curriculum (Alghamdi, 2022). In addition, teachers who had participated in the study which was conducted by Indalecio et al. (2022) perceived that an educational technology training program (ETTP) was helpful to improve and enhance technology integration in the classroom and increased their confidence of operating and incorporating educational technology in their classroom. However, the teachers still needed to receive content-specific technology training and continued professional development because these trainings helped them to strengthen their ability and skills in integrating technology using up-to-date technological devices and their learning apps (Indalecio et al., 2022).

Questions two through four were designed to investigate and to better understand the participants' perceptions and experiences on the importance of integrating MTDs and their learning apps in foreign-language classes. There was a positive association between understanding ICT and incorporating it into the visual arts classroom (Au & Rahmat, 2019). Visual-arts teachers who understood the importance of the ICT approach seek to learn more about integrating the approach into their classroom. Also, visual-arts teachers who had exhibited a higher level of positive attitudes towards ICT had more productive positive practices in the classroom concerning integrating ICT into lessons (Au & Rahmat, 2019). Teachers' confidence

and perception level also contributed to their competency in incorporating MTDs and their learning apps into their curriculum (Wyatt, 2018).

Teachers could combine online language learning applications, games, and videos to maximize their foreign language teaching (Tondeur et al., 2016). Specifically, activities that targeted participation in the foreign language are important because they built activity in the brain for that language, increasing students' learning speed (Tondeur et al., 2016). Various educational applications had been used as tools for delivering classroom lessons such as Duolingo (Cherner & Fegely, 2017). For example, the Duolingo app was one of the language-learning platforms designed to be an education technology tool for teaching and learning languages, allowing students to feel like they are playing a game while improving their foreign-language skills (Cherner & Fegely, 2017). Duolingo promoted motivation for students in languages and overall learning (Cherner & Fegely, 2017). Teachers should be open to becoming more familiar with technology and integrated new pedagogical approaches in language learning. (Niess, 2017).

Effective technology integration could improve teachers' technical integration into the curriculum (Sodik, 2020). Teachers' positive beliefs towards using technologies in classrooms were an essential factor for constructive technology integration (Sodik, 2020). MTDs could enhance students' and teachers' performance by continuously facilitating and using MTDs as a course delivery method (Klimova, 2019). García-Martínez et al. (2019) referred to Milošević et al.'s (2019) study, which indicated that integrating technology into classroom instruction benefits and improves the overall quality of the teaching process. In that study, technology was part of the pedagogical approach and was used as a tool to improve curriculum instruction (France et al., 2020). Teachers' perception and confidence level contributes to their competency in

incorporating MTDs into the classroom (Wyatt, 2018). Meanwhile, using the technological, pedagogical, and content knowledge (TPACK) model in technology integration can increase teachers' self-efficacy and technology adoption (Durak, 2020). TPACK is a model for integrating technology which highlights three essential knowledge areas which include technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK) that educators should blend to achieve effective edtech incorporation (Durak, 2020). Teachers with high technology self-efficacy tended to achieve more effective technology integration in the classroom than those with less technology self-efficacy. Teachers needed to believe in their ability to use technology to have more confidence in integrating technology into classroom instruction (Durak, 2020).

Questions five through eight sought to investigate the participants' perceived strengths, weaknesses, and challenges operating and integrating mobile technology devices into the classroom. Lack of confidence and having low self-efficacy in operating and incorporating MDTs into curriculum and having inadequate technology training in educational technology for classroom instruction affect the level of readiness among foreign language teachers (Alenezi, 2017). Teachers who had low self-efficacy in using mobile technology devices struggled to integrate MTDs into their lessons (Unser, 2017). However, teachers who understood how to incorporate MTDs and their learning applications into classrooms might provide a more effective learning environment (Unser, 2017).

The foreign-language teachers' main challenge with technology integration was the lack of training on the device to be used in the classroom (Gönen & Ipek, 2019). Having inadequate technology training could cause teachers to lack the confidence needed to integrate MTDs and their learning apps into the foreign-language curriculum and instruction (Gönen & Ipek, 2019).

Teachers' readiness challenges impacted technology integration in the classroom (Christensen & Knezek, 2018; Raman et al., 2019). Teachers must be more confident about incorporating technology into the curriculum instruction to become more effective when using technology to deliver instruction (Christensen & Knezek, 2018). Providing teachers with a step-by-step training procedure could improve teachers' perceptions and views on how to provide better classroom instruction and technology-enhanced lessons (Gönen & Ipek, 2019), and increased the teachers' level of competency and confidence (Alenezi, 2017; Gönen & Ipek, 2019). In addition, using mobile technology in the classroom could be associated with student disengagement. Some students used their technology devices for activities that were not related to their lessons (Heflin et al., 2017).

Question nine through 14 was designed to increase a better understanding of how the participants could improve their ability and skills integrating mobile technology devices into the classroom. These questions also determined how organizational leaders could provide participants with innovative ways to enhance their technical ability and skills. Barriers to integrate technology could make it difficult for teachers to utilize MTDs in their classroom (Francom, 2019). Francom (2019) used the 3-year time series survey to investigate teachers' perceptions of how barriers to integrating educational technologies change over time. Results indicated that the school's support with respect to providing educational technology training could help teachers increase technology self-confidence and willingness to integrate MTDs into the classroom (Francom, 2019). Teachers could be confident and competent in integrating technology into the classroom if provided with sufficient technology training (Dillon et al., 2019). These trainings could help teachers understand how to operate and integrate technology into their practice. Thuy et al. (2017) and Heflin et al. (2017) posited that integrating technology

into classroom instruction positively affects self-efficacy beliefs and motivation. In addition, mobile technology integration could promote student learning and increase their motivation in learning (Heflin et al., 2017).

Using technology as an educational tool made both teacher and student do more fun classroom activities together, which could strengthen the bonds between teacher and student (LaRosa & Plump, 2017). Furthermore, it could assist with creating a positive learning environment and increase student motivation (LaRosa & Plump, 2017). Teachers could be confident and competent in integrating technology into the classroom if provided with sufficient technology training (Dillon et al., 2019). These trainings could help teachers understanding how to operate and integrate technology into their practice. Thuy et al. (2017) and Heflin et al. (2017) posited that integrating technology into classroom instruction positively affects self-efficacy beliefs and motivation. In addition, mobile technology integration could promote student learning and increase their motivation in learning (Heflin et al., 2017).

Teachers might have to receive more technology training to effectively implement MTDs and their learning applications into English language classrooms (Ahmadi, 2018). In addition, effective technology integration improved teachers' language instruction and learners' language learning skills (Ahmadi, 2018). Teachers' technological pedagogical content knowledge or TPACK was essential for adopting technologies in curriculum instruction (Alquarshi et al, 2016). However, teachers might take time to embrace technology integrating into classroom instructions, depending on how they perceived technology and whether they were willing to accept it (Baturay et al., 2017).

Ahmadi (2018) suggested that having adequate education technology training helped teachers effectively introducing MTDs in English-language classrooms. Jones and Dexter (2018)

and Abu-Alghayth (2020) had similar perspectives on how organizational leaders should support teachers by addressing the lack of technology training around classroom instruction. In addition, increasing financial support for teachers' technology integration training could improve teachers' confidence with incorporating mobile technology devices into lessons (Abu-Alghayh, 2020). School leaders should consider creating a receptive environment for integrating mobile technology devices in teaching and technical problems (Hakansson, 2019), as well as creating supportive, promotive, and advanced innovative teaching, all of which comes from school leaders' ability to implement technology-enhanced learning (Hakansson, 2019).

Individual Interview Data Analysis Plan

Participants were interviewed to gather insights on their perspectives regarding the integration of mobile technology devices into their foreign language curriculum, as well as their self-efficacy in using technology for language teaching. The interviews were recorded and transcribed electronically. The data were analyzed using deductive and inductive coding approaches. During the initial coding stage, significant words and phrases were highlighted and grouped according to emerging themes, following Yin's (2018) guidelines. Each theme was assigned a distinctive color code to organize the main ideas that emerged. The methodology helped enhance my understanding of the interview content (Yin, 2018).

Data Analysis

Data analysis took place after the three data types (document, journal prompts, interviews) were analyzed separately. In data synthesis, grouping by using deductive and inductive approaches were applied to all the preliminary codes to develop possible themes and sub-themes. Triangulation of data analysis involved comparison of codes, themes, and connections to theory (Yin, 2018). I was looking for common themes that were prevalent to all categories. Then, I placed the themes and sub-themes back to my central research question and

sub-questions. Data were presented by direct interpretations when discussing the data findings (Creswell & Poth, 2018). In the data finding section, I reported the inherent shortcomings in the analysis and explained how my shortcomings might have influenced the findings (Yin, 2018). Furthermore, I sought peer review for my data synthesis process (Patton, 2015) to mitigate potential biases. Employing outside reviewers contributed to the trustworthiness of qualitative research (Creswell & Poth, 2018).

Trustworthiness

Qualitative research methodology had often been criticized for not having sufficient rigor, justification, and transparency of data collection and analysis methods (Hadi &Closs, 2015). The authors were concerned that casts doubt on the integrity of the outcomes or findings. Integrity to make an impact on practice came from demonstrating rigor in research (Hadi & Closs, 2015). Trustworthiness was what made it rational for other researchers and audience to accept research findings to build future research studies upon them (Coleman, 2022). The research being used in this study includes credibility, transferability, dependability, and confirmability. The way to ensure credibility and transferability was to ensure that the participants have the experience to discuss the phenomenon the researchers need to explore (Coleman, 2022).

The way to ensure conformability was to ensure that there were no researcher biases. It was essential to interpret what the data told researchers in an unbiased way. Constant comparative analysis was also critical in examining and determining credibility to the theories that emerge from the data (Charmaz, 2006) as I was able to specifically highlight the selected codes that had the analytical weight to be used in developing the theory (Coleman, 2022). Each

element of trustworthiness was discussed in the following section, along with how these elements were applied to this study.

Credibility

Credibility describes the extent to which a research account was believable and appropriate, with reference to the level of agreement between participants and the researcher (Mills et al., 2010). To achieve credibility in this research, operationalized techniques could ensure validation of findings and interpretation (Lincoln & Guba, 1985). In this research, I utilized three distinct kinds of instruments to collect data and information from participants—journal prompts, class syllabus, and interview process—to be able to answer the research questions posed in this study and to ensure credibility presented by the research. I utilized inductive approach and deductive approach of thematic analysis for the three afore mentioned data collection methods that were used in this study. Then, repetition of the inductive and deductive approach was performed to ensure credibility of this research. I recruited fifteen potential participants as part of my research study. The more people that addressed and discussed the phenomena that I seek to explore, the more credibility would exist in the study (Lincoln & Guba, 1985).

A technique that was further adopted to achieve credibility is triangulation. The purpose of triangulation was to corroborate the data from various sources for describing the phenomenon which as much richness as possible (Creswell & Poth, 2018; Lincoln & Guba, 1985). A triangulation strategy was also used to evaluate the consistency of findings obtained through different instruments (Carter et al., 2014). Triangulation of the data were done by exploring and synthesizing data from the journal prompts, syllabi, and interviews, to increase the credibility and validity of the research findings.

Transferability

The concept of transferability, commonly associated with qualitative research, referred to a strategy to achieve a type of external validity (Baribault et al., 2018). External validity was the process of generalization, or the extent to which findings from a study could be applied to other situations, groups of populations, or events (Baribault et al., 2018). Transferability also described the way the study was conducted and could be applied to similar studies in other settings (Baribault et al., 2018). Generalizability was applicable only to certain forms of quantitative methods, but transferability could be applied in various types of research situations (Lincoln & Guba, 1986). Transferability did not involve broad claims but invited readers of research to consider associations between elements of research and their own experience, unlike generalizability (Lincoln & Guba, 1986).

Thick description criterion was used to achieve external validity (Baribault et al., 2018). Describing a phenomenon in adequate specification one could start to assess the scope to which the measurements and conclusions obtained were transferable to alternative situations, time, people, and settings. The importance of thick description for this study was that it demonstrated that the study findings could be applied to other situations, contexts, or circumstances (Baribault et al., 2018). Other researchers could adopt this study to other settings. To ensure the transferability of the research, I provided thick, rich descriptions to readers. The descriptions relating to the participants, settings, data collection, data analysis, themes provided a concrete image of information that allowed readers to apply the information to be utilized in other settings and, or future research studies. But it could not be assured that the readers will receive the same findings and results for their studies. It was important to understand that I could create the contexts of transferability but could not assure transferability.

Dependability

Dependability described the consistency and reliability of the research findings and the extent to which research procedures were documented (Moon et al., 2016), allowing someone outside the research to follow, audit, and critique the research process (Moon et al., 2016). Dependability would ensure rigorous data collection methods and techniques including procedure and data analysis that are well-documented (Hayashi et al., 2019). Sufficient detail referencing how to collect, analyze, and synthesize the data would be rendered to permit the study to be replicated. I had an outside editor review and make necessary corrections according to all feedback and comments from my dissertation chair with the use of a trackable record of how and when changes were implemented. An audit using a third party or outside reviewer helped assuring dependability in research studies (Forero et al., 2018). Detailed draft of the study protocol had been delivered in consultation with my dissertation chair. Dependability was accomplished through an audit with a thorough formal review of the process by my dissertation committee and the research director.

Confirmability

Confirmability described the findings of the research study that could be confirmed by other researchers (Korstjens & Moser, 2018). The interpretation should not be based on a researcher's preferences, viewpoints, and experiences but would need to be grounded in the data collected from participants (Korstjens & Moser, 2018). Confirmability was the degree of neutrality that was demonstrated by researchers not to include their interest, motivation, and bias, with respect to the research findings that should be solely shaped by the respondents (Lincoln & Guba, 1985). In this research, I kept and utilized a reflexive journal to reflect on my assumptions and biases by recording the actions performed and decisions taken during the entire process

(Appendix H). I also implemented the audit trail to establish conformability by checking and repeating the data analysis process and to assure that suitable recordkeeping exactness would be reproduced in the reporting findings of this study (Yin, 2018).

Ethical Considerations

Informed consent was provided to the participants to explain the research study, the procedures, voluntary nature of the study, and the right to withdraw from the study (Lokesh et al., 2013), length of the study, potential risks, methods of the interview (TEAMS or Zoom), usage of audio recording and transcription, and privacy and confidentiality (Kaiser, 2009).

Confidentiality referred to modifying any personal and identifying information provided by participants from the data (Coffelt, 2017). In this study, codes for the two research sites (College A and College B) were used to represent the college and university and to protect their privacy. The participants' personal information and responses were accessible only to the researcher, participants, dissertation chair, and committee members. The names of the participants were replaced with codes (Kaiser, 2009). All interviews were recorded via video or audio recording and transcribed. The raw data had been kept in a secure electronic lockbox for at least three years, and then it was destroyed. I maintained a list linking codes to participant identities in a separate secure electronic lockbox that stored the raw data.

Prior to collecting any data from the participants of College A and College B, I needed to obtain approval from IRB Liberty University. A potential issue was that I had been an independent Thai language instructor for over five years for local private language schools in Northern Virginia, teaching adult learners who were at the beginner, intermediate, and advanced level of Thai language. I utilized MTDs (iPhone, laptop, iPad) and their learning apps (TEAMS, Zoom, google translate). In my own experience, usage of MTDs could help teachers access

teaching activities, reached instructional goals, and served as a learning medium to assist students with language lessons while increasing their learning motivation. Further, it not only represented an opinion, but it also led potential bias, particularly when I was interviewing the participants in assessing their experience in using MTDs in teaching foreign languages in their classrooms. To prevent my own bias from affecting the data collection, interpretation, and output findings, the participants reviewed the interview transcripts and validated their own responses given.

Permission

Informal conversations were initially held with College A and College B. Both the director of the planning and research center at College A and the faculty chair of the language department at College B had provisionally endorsed my research endeavors at their respective institutions, contingent upon the formal approval of my proposal by the IRB at Liberty University (Appendix A). Subsequently, my IRB was approved, prompting me to resubmit my proposal along with the approved IRB letter to both the director of the planning and research center at College A and the faculty chair of the language department at College B. They graciously granted permission and affirmed their support for my research endeavors at their educational institutions. Furthermore, they took the proactive step of forwarding the letter of IRB approval to potential participants, ensuring transparency and adherence to the required protocols. Throughout this process, utmost care was taken to comply with IRB Liberty University guidelines, particularly concerning the welfare, rights, and privacy of human participants.

Summary

The implementation of technology was a progressively important issue in the foreign language classroom setting. As college level programs provided more access to foreign language

technology learning applications, foreign language instructors needed to integrate mobile technology devices and their learning applications into their foreign language curricula. In this study, the focus was to describe and investigate the phenomenon of the benefits and limitations of educational technology training used in the classrooms by foreign language instructors. Through qualitative study, it was possible to relevant data to gain insights into details and to investigate the dynamics within each case. Data were collected via journal prompts, syllabi, and interviews. The data were analyzed by using the deductive coding and inductive coding of thematic analysis. Care and sensitivity were taken to establish that the research had credibility, dependability, confirmability, and transferability. Ethical considerations were applied to safeguard the identity, privacy, and data collection of all involved and to mitigate any risks of bias from my part.

CHAPTER 4: FINDINGS

Overview

The purpose of this case study was to understand the integration of mobile technology devices (MTDs) and their learning apps into foreign-language curricula by foreign-language instructors at two colleges in the Mid-Atlantic region of the U.S. The research questions focused on the teachers' experience, perception, and teaching methods. The chapter includes the participant descriptions, themes from the data, and responses to the research questions. Data from journal prompts, document analysis, and individual interviews were reviewed, analyzed, and combined to formulate the contents of this chapter.

Participants

Table 1 presents an overview of the participants' demographic characteristics. To maintain participants' privacy, names of the participants were replaced by codes such as W1_Spanish or M1_Japanese. Seven participants were female, and three participants were male aged between 37 and 56 years. Participants were drawn from two research sites (College A and College B). Five participants were drawn from College A and another five from College B. These participants represented six different content areas including Arabic, Chinese, French, German, Japanese, and Spanish. Years of experience in teaching ranged from 3 to 20, while years of exposure using MTDs ranged between 3 years and 12 years. These participant characteristics show the sample population had adequate skills and knowledge about the subject area and data collected from them via interview responses, shared prompts, and course syllabus was important in answering the research aim and research questions.

Table 1

Participants' Demographic Characteristics

Participants Teacher Participant	Content Area	Age	Gender	Workplace	Years Taught	Years Taught with MTDs and Language Apps
W1_Arabic	Arabic	56	Female	College B	16	10
W1_Chinese	Chinese	53	Female	College A	15	11
W1_French	French	44	Female	College A	8	6
W1_German	German	37	Female	College B	3	3
W1_Spanish	Spanish	48	Female	College B	10	6
W2_Spanish	Spanish	38	Female	College B	7	6
W3_Spanish	Spanish	50	Female	College A	20	12
M1_Spanish	Spanish	40	Male	College A	5	4
M1_Japanese	Japanese	53	Male	College A	12	7
M1_French	French	46	Male	College B	9	6

Participant Descriptions

W1_Arabic. She is an Arabic-American female and is 50-60 years old. She has a full-time Arabic instructor at College B for 16 years. She is also a leader of Arabic curriculum developer.

W1_Chinese. She is a Chinese-American female and is 50-60 years old. She has taught full-time at College A for 15 years. She is an Asian language leader in her language department. She also teaches part-time online on weekends for a private language school.

W1_French. She is a French-American female and is 40-50 years old. She has been an adjunct instructor at College A for 8 years. Teaching is her second career.

W1_German. She is a German-American female and is 30-40 years old. She has been an adjunct instructor at College B for three years. Teaching is her first career. Her language teaching experience includes teaching at a private elementary school.

W1_Spanish. She is a Spanish-American female and is 40-50 years old. She has been a part-time instructor at College B for 10 years. She was a sponsor of extracurricular student groups.

W2_Spanish. She is an American female and is 30-40 years old. She has been an adjunct instructor at College B for seven years. She is also a private tutor of Spanish language for high school students.

W3_Spanish. She is a Spanish-American female and is 50-60 years old. She has been a full-time instructor at College A for 20 years. The majority of her teaching career has been at College A. She is considered a go-to teacher for technology integration.

M1_Spanish. He is an American male and is 40-50 years old. He has been an adjunct instructor at College A for 5 years. He is also a Spanish translator for a translation company and teaches part-time at a private language school for adult learners.

M1_Japanese. He is a Japanese-American male and is 50-60 years old. He has been an adjunct instructor at College A for 12 years. Teaching is his third career.

M1_French. He is an American male and is 40-50 years old. He has been an adjunct instructor at College B for 9 years. His hobby is writing French language children's books.

Results

The research aims and questions were related to five themes and fifteen sub-themes discovered through data analysis. Two sub-themes exist for themes 1 and 2, five for themes 3, 3, and 4. The codes from journal prompts, document analysis, and individual interviews were

integrated into linked themes to simplify the qualitative findings presentation. As a result, related concerns from each data source were combined into related categories rather than presented individually.

Table 2 presents a summary of the data codes, major themes and subthemes that were generated from analyzing the raw data. Participant quotes from the interview excerpts are used to support each theme and subthemes.

Table 2

Themes Identified After Thematic Coding and Analysis of Journal prompts, Syllabi, and Individual Interviews

Data Codes and Key Words	
Theme 1: Lived experiences	**Sub-themes**
Essential, necessary, makes learning more visible, play a big role, learning foreign language, faster and interesting for students, , eases learning, and compliments traditional teaching, search for current information.	1.1 Perceived importance of MTDs
Lost when using language apps, partial self-efficacy, high self-efficacy, no problem using technology, still learning to improve MTD use in teaching.	1.2 Self-efficacy
Theme 2: Adapting Teaching Methods to Use MTDs	**Sub-themes**
Speaking and listening tasks, games, videos, music, crosswords, visuals, Google translation, dictionaries, and interviews/ meetings	2.1 Facilitating Reading, Listening, and Speaking

Search for new words, terms, spelling, translate language from native to foreign, translate foreign to native.	2.2 Translation and Dictionaries
Theme 3: Challenges Experienced Integrating MTDs	**Sub-themes**
Lack of attention, low focus, and disruption among students, spend more time on social media like Instagram, Facebook, TikTok.	3.1 Disruptions in Classrooms
Difficulty accessing internet, challenges with Wi-Fi connection, appropriate learning materials, poor Wi-Fi, hurdles connecting devices, poor signal reception, devices fail to work, no internet access.	3.2 Resource Accessibility
Boring, unreliable, difficult to get accurate meaning, challenging to track what students are doing.	3.3 Adaptability Issues
Equality accessing education, affects the learning pace of students, hinders information access, and potential hurdle engaging students.	3.4 Class Instruction, Values, and Students' Learning
Inadequate training, ineffective skills, and laxity among teachers to learn technology.	3.5 Lack of teacher Training
Theme 4: Enhancing Skills Integration into Curriculums	**Sub-themes**
Continuous personal learning, research, peer collaboration, information sharing, and taking part in training workshops.	4.1 Personal learning and research
Helping those reluctant to embrace technology, and meet individual teacher professional development needs, Assessments, evaluation, practical tests, and experiments to assess teachers' competency.	4.2 Participate in training
Access to technology training opportunities, close IT support, resource allocation, online support, and close coordination, standardize training, allocating needed resources.	4.3 Organizational support in technology training
Theme 5: Benefits Operating and Integrating MTDs	**Sub-themes**

Improved access to resources, time saving, student examination, assessment, lesson design, and better teaching, students become motivated, access to wide range of curriculum content, time- and cost-effective.	5.1 Improved efficiency
Word pronunciation, interact with native speakers, improves word pronunciation, better use of phrases and terms.	5.2 Better Language Practice
Student and teacher interaction, better engagement in class, connection with learning resources, close connection.	5.3 Interaction and Engagement

Theme 1: Lived Experiences of Using MTDs

Teachers shared a variety of perspectives on their actual experiences as foreign language instructors, including MTDs and their learning applications in their curriculum. Two subthemes were discovered to aid in understanding teachers' lived experiences with MTDs. These subthemes dealt with the perceived importance of MTDs and self-efficacy. M1_French from College B stressed the point, highlighting that "employing technology, such as laptops, smartphones, and other advanced devices, is crucial for teaching classes, especially foreign language ones, in the current times." M1_Spanish from College A, on the other hand, stated that "using MTDs as a foreign-language instructor facilitates our job by making learning more visible." However, when it came to using these technologies, instructors' levels of self-efficacy differed substantially. "I would describe my self-efficacy as partial," M1_Spanish from College A admitted, while W1_French from College A stated, "I sometimes can be lost when it comes to using some features of language apps."

Despite these disparities in abilities, most teachers reported favorable experiences with MTDs in their classrooms, emphasizing their critical role in effective education. W1_Arabic from College B found particular tools useful, stating that the Google Translation app is a "very

helpful application to translate the language into English and English back to the original language." Meanwhile, W1_Chinese from College A provided a favorable perspective on using MTDs, stating, "I've learned that using virtual classes is really helpful." These findings demonstrate the various methods by which teachers adapt and integrate MTDs into their pedagogy, thereby improving the learning experience for their pupils.

Sub-Theme 1: Perceived Importance of MTDs

The critical role that MTDs play in strengthening the educational process was a point of unanimity among all participants, who described their advantages in various ways. Their significance was confirmed by M1_French, a French instructor from College B, who said, "I think employing technology like laptops, smartphones, and other advanced technology gadgets to teach any lessons, especially foreign language classes, is vital and needed for the present day. When they can use their mobile technology devices to look for information about their learning, I observe that my pupils want to learn foreign languages.

M1_Spanish also highlighted the transformative impact of MTDs from College A, who stated, "Using MTDs as a foreign-language instructor facilitates our job by making learning more visible and technology can bring another culture into the classroom, and what better way to learn a foreign language than being immersed." W1_Spanish from College B said, "I really consider that using MTDs and their learning applications in the foreign-language curriculum makes learning a foreign language easier, faster, and more interesting for the learner." This statement further demonstrates the value of MTDs. Similar to how M1_Japanese from College A, W1_German from College B, W1_Spanish from College B, and W3_Spanish from College A praised the many advantages of MTDs, including their practicality and ease of use as well as their complementarity with traditional teaching. W3_Spanish from College A also expressed

excitement about integrating AI into upcoming educational endeavors. The lesson plans that the teachers disclosed demonstrated the importance of MTDs by strongly encouraging students to bring their mobile devices as supplemental learning resources.

Table 3 presents the MTDs requirements among some teachers in their course outlines or syllabi, further emphasizing the importance of MTDs in facilitating foreign language learning.

Table 3

Teacher Participants

Teacher	Site/ Syllabus	Required MTDs Resources
M1_Japanese	College A, Japanese	□ Technology devices may be allowed such as, smartphone, laptops, and iPad. □ Students may use their devices for learning their Japanese language lesson only.
M1_Spanish	College A, Spanish	□ Electronic translators or apps □ USB / flash driver and Headphone with microphone (if your computer does not have them integrated). □ Student must be familiar with Blackboard, Internet and WhatsApp.
W1_Chinese	College A, Chinese	□ The inappropriate use of technology, such as cell phones, iPods, laptops, calculators, other electronic devices in the classroom is not tolerated.
W1_German	College B, German	□ Computer with basic audio/video output equipment including any technology devices that are available to students such as, smartphone, iPad, or laptop.

		Internet access (broadband recommended) C. Microsoft Office Rosetta Stone® Version 4 TOTALe™ Google Translate and YouTube
W1_Spanish	College B, Spanish	Digital recorder or similar device. USB headset with microphone. Computer with basic audio/video output equipment Internet access (broadband recommended) Microsoft Office Skype account YouTube account

Sub-Theme 2: Self-Efficacy

The interview replies and prompts revealed that the participants had a range of levels of self-efficacy when using MTDs and their learning applications in classroom settings. While some participants expressed full or low confidence, others showed high confidence. When asked about utilizing mobile technology and language apps to teach her language class, W1_Arabic from College B responded, "I don't think I have concerns using mobile technology and language apps. I feel at ease using my laptop and smartphone, even with apps." Similar assurance was expressed by M1_French from College B, who said, "I know how to use a laptop and my iPhone for teaching my students." Compared to traditional techniques, M1_Spanish from College A also observed greater efficacy. She added, "Students have demonstrated to be more interested in many different topics when you can get students to focus (using technology in this case), they are actively learning." M1_Japanese from College A stressed the value of self-efficacy in raising

instructors' competency, saying, "I think you mentioned earlier in terms of my self-efficacy--I think a competency that would help students in general."

The participants emphasized the need for self-efficacy and confidence for effective teaching. The College a student W3_Spanish class noted, "For teachers, self-efficacy, motivation, and confidence are all equally important to integrate technology for teaching their language classes." W1_Spanish from College B, W1_German from College B, and W1_Arabic from College Ball agreed with this statement, emphasizing the value of communication, technological knowledge, student responsibility, and the importance of motivation and confidence in the classroom.

Others, such as W3_Spanish from College A and W1_Chinese from College A, revealed limited self-efficacy in contrast. W1_Chinese from College A cited practical difficulties, saying, "It is not easy to integrate technology into my classes, as limited access of Wi-Fi is not available to be used in all classroom settings." W3_Spanish from College A stated, "I would describe my self-efficacy as partial - I feel that I need to know much more than I do to integrate technology more effectively in my classroom." At the same time, W1_Chinese from College A pointed out practical difficulties.

Finally, although several participants admitted to having low self-efficacy in technology use, such as W2_Spanish from College B and W1_French from College A, they showed a willingness to learn and adapt. "I admit that sometimes I can be lost when it comes to using some features of language apps," W1_French from College A said. However, after learning to utilize those tools, I felt more confident using them in the classroom. Despite having various degrees of confidence in their ability to use MTDs, all teachers acknowledged that they play a crucial part in improving foreign language instruction.

Theme 2: Adapting Teaching Methods to Use MTDs

In the interest of effective teaching, teachers described the various MTD applications they have used in the classroom, including speaking and listening exercises, games, movies, music, crossword puzzles, graphics, dictionaries, Google translation, and meetings and interviews. A concrete instance of MTD use in a classroom was provided by M1_French from College B, who stated, "I utilize MTDs for speaking and listening assignments. I ask each of my pupils to record their conversation using the Voice Record app so that I can transcribe it." Additionally, W3_Spanish from College A discussed how MTDs have changed the way she approaches her lessons, saying that they enable her to "spend less time in formal instruction from the front of the classroom and more time assisting students with specific questions on assignments, which I prefer and think is more effective." As a result, many educators view MTDs as valuable resources that help students hone their public speaking abilities and correct the pronunciation of unfamiliar words.

Sub-Theme 1: Facilitating Reading, Listening, and Speaking

The participants agreed that MTDs were crucial for various educational tasks, highlighting their influence on developing reading, listening, and speaking abilities. In her unique use of MTDs, W1_French from College A stated, "I like to have my students look at pictures of objects, animals, fruits, and people's activities on their MTDs and formulate 5-7 simple sentences and 8-15 complex sentences." M1_Japanese from College A revealed that MTDs offered more than just functionality, encompassing elements of fun and involvement. "In my class materials, I incorporate games, YouTube, or music videos. YouTube and music videos are favored learning tools for my students, M1_Japanese from College A mentioned.

As M1_Spanish from College A noted, "The good thing about implementing technological tools in a classroom (when available) is that you as a teacher have a wider catalog to choose from." Using MTDs was also significant in providing a large array of academic resources. Because children are so visually and physically active, employing technology as a learning aid can range from using games like crossword puzzles and virtual field trips to using it as a "reward" for doing academic tasks. W1_Arabic from College B remarked, "I'm having my student use Google translation a lot of the time, and it works. It emphasizes the importance of MTDs in language translation. I want my kids to be able to explain an image and at least have a brief discourse before writing a straightforward text. To check if they are on the correct track later, I have my pupils utilize Google Translate. It helps them gain confidence in using the language they have learned."

Sub-Theme 2: Translation and Dictionaries

Several attendees described their methods for incorporating technology into the classroom. W1_Spanish from College B reflected, "The topics in the university vocations I teach are primarily technical ones therefore students' activities are related to the translations of various written materials into Spanish. I urge students to use apps like Word Reference (to look up terms), Deepl translator, or applications with grammar explanations, exercises, or pronunciation instead of lists of vocabulary words or grammar books." It was reinforced further by W2_Spanish from College B, who wrote, "Using learning applications for a longer conversation on particular topics may be tremendously great for the freshmen and sophomores because they can learn vocabulary, practice on quizzes on their devices." The same was said by W1_Chinese from College A, who advised students to "use their technology devices to look up dictionaries, do research, and do class exercises," and by W1_Spanish from College B, who emphasized

research, glossary consulting, and exercises. An alternative viewpoint was added by W1_German from College B in the contract, who stated, "I permit and let my pupils to use their smartphones or laptops in my class. I also enjoy using FaceTime to mimic job interviews, basic conferences and meetings, and even hospital visits with my students."

Theme 3: Challenges Experienced Integrating MTDs

The participants discussed difficulties when implementing MTDs in their foreign language schools. It "can be a very annoying method of class instruction," according to M1_French from College B, requiring teachers to forgo conventional methods and rely on explanations from mobile devices. W3_Spanish from College A expressed worries about "human problems and trackability issues," pointing out that teachers couldn't monitor how students used the gadgets. W1_Spanish raised reliability concerns from College B, who claimed that "sometimes the learning application does not give us accurate meanings, translation, or interpretation," and W1_German from College B, who remarked on the challenge of finding efficient apps based on the most recent research. W1_Chinese from College A discussed how inadequate teacher preparation further thwarts MTDs integration efforts. The teachers' difficulties utilizing the new technology and its dependability in delivering language education run through these problems, revealing possible restrictions to MTDs incorporation.

Additionally, problems, including poor student focus, interruptions, and lack of attention, were brought on by using MTDs in classrooms. Accessing the right resources and having a stable internet connection were other issues that teachers ran into. According to W3_Spanish from College A, "about half the students are reluctant to use their school-issued ThinkPads." He also noted that pupils preferred using their smartphones over those issued by the school. W1_Spanish from College B said “there need to be more resources or possibilities for professional

development in technology integration." W1_Chinese from College A remarked, "The most difficult thing during the classes was to keep everyone engaged and on task." W2_Spanish shared this sentiment from College B, who expressed worry that social media would divert students from their studies. W3_Spanish from College A acknowledged the value of technologies for machine translation like Google Translate but expressed concern about the rise in cheating with MTDs use. Last but not least, W1_Arabic from College B and W1_Chinese from College A mentioned how much effort it takes to organize classes incorporating MTDs, and W1_German from College B both brought up how distracting technology can be. This comment suggests that integrating MTDs into the learning process needs to be done more precisely.

Sub-Theme 1: Disruptions

The participants voiced concern over the possibility of distraction posed by MTDs, frequently resulting in students losing concentration on their academic work. "I don't want the students to become engrossed in their iPhones or iPads," said M1_Japanese from College A. He further stated "I want them to remain attentive and involved. I want kids to be able to focus on their smartphones and iPads." W1_French from College A stated, "Students' lack of focus during class is a problem because students sometimes focus too much on using MTDs." To get their full attention, W1_German from College B said, "I want my students to look at me, look at my face when I pronounce the word." W1_Spanish from College B discussed how holding students' attention might be challenging when distracted by "other apps, webpages, online games, or social networks." The College B student W2_Spanish explained how she overcame these difficulties, stating, "one risk of using digital gadgets in the classroom is that my students can get sidetracked. I wanted to make sure that my pupils were using their gadgets for language learning and not using social media during class."

MTDs and their learning apps have the potential to make learning easier, yet distractions frequently prevent them from being used effectively. While W3_Spanish from College A pointed out that "student reluctance/unfamiliarity with M.S. suite and their laptops" was a problem, M1_French from College B thought that the "most challenging issue should be avoiding distraction with other applications or social networks." The necessity for "close monitoring" was mentioned by W1_Spanish from College B because "students become distracted playing other games on their MTDs." Further highlighting the conflict between technology and focus, W2_Spanish from College B said, "Sometimes it was difficult when it comes to allowing them to use their technology devices in the classroom... they were not focusing on me who was their teacher." The influence of distractions on educational outcomes was stressed by M1_Japanese from College A, who stated, "Integration could be affected when students get distracted to spend more time on their devices than what the teacher is instructing." In addition, W1_German from College B noted that "students may not listen to me as much as it should be, during the class, because they focus on using their phones too much." Last, W1_Arabic from College B brought attention to MTDs abuse by stating that "some students used their mobile devices for entertaining purposes, but not for learning the language."

Sub-Theme 2: Resource Accessibility

The participants cited access and resource restrictions as major obstacles to the efficient application of MTDs in language teaching. "I do not have access to the online components that are supposed to accompany the textbook," said W3_Spanish from College A about her difficulty accessing the online components of her major instructional material. There is no possibility to provide external connections on the Savvas website. W1_German from College B and M1_French from College B expressed similar worries about some applications being time-

consuming and difficult to customize for specific students. Resource limits, such as inconsistent internet, a lack of available devices, and budgetary restrictions, were mentioned as additional difficulties. Being a foreign-language teacher in a public school with few resources is arguably the biggest hardship a teacher may encounter, as M1_Spanish from College A attested. W1_Arabic from College B said, "Wi-Fi seems to be an issue sometimes, and I didn't have a good Wi-Fi reception in the classroom." W1_Chinese from College A also raised worry about educators' technological aptitude, saying, "Some teachers may lack technology skills."

Sub-Theme 3: Adaptability Issues

Concerns were raised by teachers over the use of MTDs in foreign language instruction. According to M1_French from College B, the technology was disruptive, which noted that "sometimes it can be a very annoying method of class instruction." MTDs tracking challenges were addressed by W3_Spanish from College A, who noted that "most apps still require a human to track and grade whether an assignment was completed." W1_Spanish from College B cited problems with "lesson planning with the use of MTDs," while W3_Spanish from College A questioned the efficacy of programs like Quizlet, saying that "Quizlet is great as a flashcard app but...flashcards are not especially effective in teaching vocabulary." Using Google Translate as an example, W2_Spanish from College B expressed worries about its inaccuracies, saying that "Google Translate sometimes does not give me accurate meanings." Despite obstacles, W1_Spanish from College B promoted the use of modern, classroom-friendly technology in the public education system to address concerns with adaptability and improve the integration of MTDs into instruction.

Sub-Theme 4: Class Instruction, Values, and Students' Learning

Participants' insights revealed a range of opinions on using MTDs in the classroom, with implications for student engagement, information access, and learning pace. In a statement highlighting the advantages of MTDs, W3_Spanish from College A said, "I believe that integrating MTDs has overall been a positive thing, which helps equalize access to technology and allows students to work independently as well as in teams." The pace of technology, however, was tempered by M1_Japanese from College A: "I think sometimes the technology has a tendency to either go too fast for some students and they get a little bit overwhelmed." "Technology is helpful for students in learning a foreign language," said W1_Chinese from College A, adding that "there are other drawbacks to consider. However, using technology in the classroom, such as a smartphone, can occasionally provide a distraction when it causes anything unrelated to the teaching and learning taking place in the classroom. In the classroom, I can see my pupils texting and using social media sites like Facebook, Instagram, and TikTok."

W1_German from College B expressed similar worries about the detrimental effects of technology on education, saying that "when things about integrating technology into my classroom didn't go well as I expected it to be, it negatively affects the teaching process in terms of we couldn't even start, continue, or finish our lesson of the day." As a teacher, I can see potential distraction with using too much technology in the classroom among my students...if they don't look at their teacher when I teach them how to pronounce the words, how would they be able to speak to them correctly?" W2_Spanish from College B was cautious about the excessive use of technology in the classroom, highlighting the need for direct teacher-student interaction. They can always learn Spanish outside of the classroom with their technological devices.

Sub-Theme 5: Lack of Teacher Training

Due to a lack of thorough teacher training, integrating MTDs and accompanying learning apps into curriculum preparation and instruction delivery has been difficult. Participants expressed concerns about teachers' resistance to new technologies and insufficient training, leading to ineffective skills. W1_Chinese from College A claimed, "There is a lack of access to technology and adequate training in my workplace, which leads to ineffective skills of using technology for teaching foreign language classes," and cited a lack of instruction on particular devices like iPads, laptops, and tablets as the main challenge. W1_Arabic expressed a similar worry and emphasized the necessity for more detailed instructions: "I don't think we received adequate training regarding using language programs for teaching. The school has yet to set a standard for the types of apps they wish us to use to teach languages."

When asked about the technology training quality, W1_French from College A said, "Sometimes I felt that we didn't have adequate training and the technology trainings did not provide me with a clear understanding of how to integrate MTDs into the classroom." M1_Japanese also highlighted the inconsistent training from College A, who said, "not every teacher receives a full dose of training or consistent training in terms of how to use mobile technology with the language they're teaching." W2_Spanish from College B acknowledged having rudimentary knowledge of how to use MTDs, admitting that "I am still learning and improving skills in technology for teaching language."

As M1_Japanese from College A noted, "If you have older teachers or professors, maybe they tend to be a little bit more reticent or reluctant to use too much technology because they feel they're not comfortable or they feel like they're going to lose control of the class."

Theme 4: Enhancing Skills Integration into Curriculums

The participants have combined individual and group learning methodologies based on their interview analysis, prompts, and curricula. When discussing how to use online resources, M1_French from College B shared, "To improve on technology skills, I watch YouTube and read books." The value of self-paced learning was also underscored by W3_Spanish from College A, who stated, "I read when I have time." W1_Spanish from College B further emphasized the need for independent research by saying, "I do research and search for materials."

In addition to these individual learning strategies, a peer-led collaborative approach was crucial to their progress in skill. The participants disclosed that they consulted colleagues who had greater knowledge about the use of technology in foreign language instruction for advice. These encounters frequently involve asking about MTDs or conversing inside ICT groups. Teachers have improved their ability to include MTDs and their applications in the curriculum by combining several continuous learning methodologies.

Sub-Theme 1: Personal Learning and Research

The participants shared their learning approaches for incorporating MTDs. "I try to master my technology skills by exploring features of my language apps. I also read books and watch YouTube," said M1_French from College B. W3_Spanish from College A stated, "I engage in daily practice and research, focusing on ongoing self-improvement." W1_Spanish from College B said, "I try to do research and look for material that may be helpful for my classes." M1_Spanish from College A argued in favor of learning from mistakes, adding, "In my opinion, you gain knowledge by experience. You can more easily see what else you need to

study once you've done that." M1_Japanese from College A and W1_French from College A had emphasized "testing MTDs before using them in the classroom."

W1_Arabic from College B elucidated her approach by stating, "I like to check online or visit the App Store to see any new versions of language learning apps. When assigning a class project to my pupils, I always remember it." Concurrently, underscoring the broader necessity of staying abreast with technology, W1_Chinese from College A articulated, "It's important to stay current with technical advances." Adding depth to the conversation, W2_Spanish from College B delineated his strategy, sharing, "I'll discover some language instructors on YouTube," and further noted, "I'll search for folks whose podcasts I can subscribe to; I rely on podcasts to help me learn languages and to use in my classroom."

Sub-Theme 2: Participate in Training and MTDs Skill Testing

The participants promoted the development of technological expertise through instruction. W1_Spanish from College B advocated for "more training on new technology and the use of different tools," whereas W3_Spanish from College A actively engaged in I.T. department training. W1_Chinese from College A opined that "training is the best way to learn how to use new technology." W1_Arabic from College B asserted, "It's about training," about conventional training. I would assess how effectively the language instructors are familiar with using technology and language apps. While W1_Spanish from College B recommended practical exams and learning sessions, W3_Spanish from College A emphasized "robust support for I.T., training for teachers, and encouragement for experimentation."

M1_Japanese from College A suggested "a little pre/post quiz," and W1_German from College B insisted on more useful evaluations and Wi-Fi upgrades. M1_Japanese also noted a two-phased strategy for MTDs integration from College A. The only method to study, develop,

and apply MTDs and learning apps is to have qualified teachers, according to W1_Spanish from College B. W1_Arabic from College B concentrated on the need for feedback in "Training Opportunities." At the same time, W1_German from College B emphasized in-depth training sessions, adding that "providing a few more in-depth training sessions for language teachers is crucial," and stressed catering to individual learning speeds and technological preferences.

Sub-Theme 3: Organizational Support in Technology Training

The participants agreed that their individual universities' support of them through technical education and other tools necessary for mobile-assisted language learning (MALL) was crucial. "My college offers technology training that can be helpful in my language class. We have an I.T. staff that can assist teachers with technical problems," M1_Japanese from College A stated. Similarly, College A's W3_Spanish thanked her I.T. staff for their commitment and assistance, adding, "I have also been allowed to attend the Technology for Foreign Language Instruction conference." While acknowledging the differences in resources offered by public and private colleges, W1_Spanish from College B stated, "sometimes they give us some training or improve connectivity." While acknowledging the program's value, W1_German from College B had some reservations, saying that "these trainings don't ensure how successfully language teachers can use and integrate mobile technologies. It is influenced by the age and generation of the instructor as well as their own drive, self-efficacy, and personal views." In agreement, W1_Chinese from College A stated, "My workplace provides general training on teaching with technology, but training related to specific mobile devices may have to be provided." These ideas were mirrored by W2_Spanish from College B, who also brought up the flexibility of certain teachers during the pandemic: " They had to teach via Zoom or TEAM. However, some people could still find it challenging to use language-learning software."

Theme 5: Benefits Operating and Integrating MTDs

The participants emphasized the transformative effects of MTDs in language learning classrooms, emphasizing their role in boosting student engagement, expanding access to a variety of instructional materials, and the efficiency of their use in terms of time and money. The accelerated feedback process that MTDs enable has received particular praise from M1_Japanese from College A, W1_Spanish from College B, and W3_Spanish from College A. W1_Spanish from College B noted that "it allows for instant correction," and W3_Spanish from College A emphasized their role in "fast feedback for students with self-scoring assignments and games, which they find very motivating." W2_Spanish from College B further stressed the motivational component, who said, "Motivation in the classroom skyrockets because my students know how to be successful in learning language with the use of technology."

Language learning is facilitated by MTDs, according to W3_Spanish from College A, W1_Spanish from College B, and W1_Chinese from College A. While W3_Spanish from College A praised the "wide range of content available in Spanish, which facilitates content sharing with teachers around the globe." W1_Spanish from College B praised the technology for its effectiveness, saying that "it reduces time and effort and makes teaching more effective since you can provide students with different activities, contents, and resources on the same topic of discussion." W1_Chinese from College A stressed the possibility of "plenty of exercises to be done whenever and as many times as students want."

W1_Spanish from College B, W1_German from College B, W1_Chinese from College A, and W1_Arabic all mentioned the benefits of MTDs in terms of cost and time savings. The eco-friendliness was welcomed by W1_Spanish from College B, who said it was "good for the pocketbook and the environment." It was described as "time efficient" by W1_German from

College B, who also acknowledged that "technology helps me prepare class materials much more easily." MTDs "can save teachers time and effort while also making teaching more effective," recognized W1_Chinese from College A, while W1_Arabic from College B agreed, underlining the effectiveness of combining "all teaching-learning materials together."

Sub-Theme 1: Improved Efficiency

Participants highlighted the impressive efficiency improvements that MTDs in foreign language training offer. M1_Japanese from College A emphasized how MTDs allow "students to research online or take a quiz online," providing professors with "real-time" feedback and enabling them to alter and improve instruction quickly. Additionally, MTDs are well-suited to supporting continual language reinforcement outside of the classroom, aiding students in maintaining and using their new language abilities.

The effectiveness of MTDs was lauded by W1_Spanish from College B, W1_German from College B, and W1_Chinese from College A. W1_Chinese from College A also mentioned the possibility of the devices "saving more time to gather more up-to-date information that is related to the lessons." W1_Spanish from College B echoed the sentiment and stressed the adaptability of MTDs, enabling personalized learning experiences. "You can increase the screen's magnification when reading, change a listening activity's speed or volume, and listen as often as you like." Due to its ability to be adapted to specific needs and time constraints, flexibility increases learning effectiveness. "I can design and make my weekly lesson more interesting and current by using games on the learning applications as part of the online class materials," W1_German from College B said when he recognized the potential for innovation in lesson design. These participants undoubtedly concur that the effectiveness of MTDs is a strong suit for teaching foreign languages.

Sub-Theme 2: Better Language Practice

All participants agreed that technology encourages better language learning and interaction, especially with native speakers. These advantages were emphasized in the teaching contexts of W1_Spanish from College B, W3_Spanish from College A, and W1_Arabic from College B. The importance of low-stakes practice made available by technology was further stressed by W3_Spanish from College A, who said that "automated games and worksheets allow for lots of lower-stakes practice, which is excellent for foreign language learning speaking and word pronunciation." The effectiveness of technology integration was noted by W1_Spanish from College B, who repeated this idea and stated that when utilized properly, it can offer an "excellent opportunity to practice and develop their language abilities. In addition to enhancing speaking skills, technology "increases the students' opportunity for authentic interaction with native speakers and other language learners," according to W1_Arabic from College, improving language learners' experiences.

Sub-Theme 3: Interaction and Engagement

The participants confirmed that technology positively impacted student engagement and interaction in the classroom. According to W1_Spanish from College B, "It ensures that everyone becomes interested in learning and improving the language...during classroom interaction." Pupils' excitement levels are raised when they utilize their own devices for educational purposes, according to W1_Chinese from College A, who stated, "My students seem to be more excited and more engaged when using their smartphones or laptops to look up information online." In agreement with this statement, W1_Arabic from College B stated, "many of my students like to use their smartphones, iPads, and laptops to study language during the class session." While W1_German from College B also stated, "A bunch of my students are into

using their phones, iPads, and laptops to learn new words and stuff while we're in class." However, W2_Spanish from College B pointed out that having access to the resources needed can have an impact on how effectively technology is implemented, saying that "successful uptake improves how learners engage with learning materials, but what if there are problems with technology, Wi-Fi, or funding for technology for teaching-learning at school" The community advantages of technology was highlighted by M1_Japanese from College A, who said, "Through technology there's stronger student-teacher engagement, and they may form a group among themselves to practice if there's additional practice needed."

Research Question Responses

In this section, we restate the research questions and discuss the themes that emerged during the research, which are relevant to these questions. The research questions were answered through a comprehensive analysis that involved conducting focus group, comparing themes with journal prompts, syllabi, and individual interviews.

Central Research Question

What are the lived experiences of foreign language instructors implementing mobile technology devices and their learning applications in their curriculum? The collected journal prompts, foreign language syllabi, and interviewees' insights related to the notion that teachers are pleased with the results of integrating mobile technology into their lesson plans. All participants thought including MTDs in their curriculum was significant, beneficial, and efficient (Theme 1). The College B student M1_French stressed the importance of these technological resources, saying, "using technology like laptop, smartphone, and other advanced technology devices to teach any classes, especially foreign language classes are essential and needed for the present time." Like M1_Spanish from College A, she described how these tools make teaching

easier and improve learning, saying that "using MTD's as a foreign-language instructor facilitates our job by making learning more visible."

All participants acknowledged the value of MTDs in their instruction, highlighting the transforming function they perform in the classroom (Sub-theme 1.1). W1_Spanish reached a similar conclusion from College B that MTDs make learning "easier, faster, and more interesting for the learner," and W3_Spanish from College A that she was looking forward to future sessions that will incorporate A.I. Teachers' syllabi also highlighted the importance of MTDs by encouraging students to use their own mobile devices as supplemental learning aids (Sub-theme 1.1).

The study's participants concurred that having self-confidence, or self-efficacy, is essential for effectively utilizing MTDs in instruction (Sub-theme 1.2). They displayed various degrees of technical self-efficacy. As an illustration, W1_Arabic from College B stated, "I don't think I have problems using mobile technology and language apps for teaching my language class," demonstrating high self-efficacy and confidence. However, despite her difficulties, W1_French from College A was able to learn, adding, "I admit that occasionally I can be lost. However, after spending some time, I became more knowledgeable and at ease using those programs in the classroom. All teachers used these gadgets and apps to assess their pupils' grammar knowledge. The tech-based testing not only improves student learning but also increases self-efficacy by demonstrating to them that they can succeed in today's fast-paced world (Geng et al., 2019).

Sub-Question One

How does foreign-language instructor training influence the preparedness and willingness of foreign-language instructors in integrating MTDs and mobile applications within the curricula

to enhance self-efficacy among students? Results from Theme 2 show that teacher training plays a crucial part in adjusting teaching strategies to include MTDs and associated learning apps in curricula. W1_German from College B stated that appropriate training allowed her to be "comfortable to use and integrate technology like smartphones, iPads, and laptops to my course," enhancing her preparation for technological assimilation in the classroom. W1_Arabic from College B also pointed out that appropriate training removes the "stress with using or blending technology and applications" in the classroom, encouraging individual desire to use technology for foreign language learning. A similar statement from W3_Spanish from College A, "I have been given a good amount of autonomy and support to integrate technology in the classroom," raises the possibility that such empowerment increases teachers' readiness and willingness to use MTDs. However, instructors from College A, like W1_French and M1_Spanish, expressed worries about their readiness to incorporate new technologies, mostly attributing their reluctance to insufficient training. As a result, these results support the crucial role of foreign language instructor training in helping instructors be ready and receptive to integrating MTDs and their learning apps into curricula, which ultimately helps students feel more capable (Sub-theme 2).The participants (sub-themes 2.1 and 2.2) emphasized the adaptability of MTDs in boosting pedagogy by employing them for speaking and listening activities, visual presentations, games, movies, and translations. M1_French from College B, for instance, stated that she uses MTDs for speaking and listening assignments, "I use the Voice Record app to record my students speaking about their given topics so that I may afterward read what they have said." M1_Japanese from College A continued, "I use games, YouTube videos, or music videos in my course materials. YouTube and music videos are popular learning resources for my kids." These remarks

demonstrate how MTDs and associated learning apps can increase the variety and interest of learning (Bernacki et al., 2020).

Instructors mentioned a combination of personal learning and professional training methodologies when discussing the impact of instructor training on readiness and willingness to integrate MTDs (Theme 4). Through independent study, M1_French from College B improved her technological aptitude. She said (sub-theme 4.1), "I aim to perfect my technology skills by researching aspects of my language apps. I also read books and watch YouTube." In a similar vein, College A student W3_Spanish promised to "undertake daily practice and research." W3_Spanish from College A actively participated in I.T. department training about teacher training, whereas W1_German from College B emphasized the necessity of accommodating various learning styles and technological preferences in training sessions. They stressed the importance of providing additional in-depth training sessions for language instructors. 4.2 is a sub-theme. The participants concurred that effective use of MTDs and associated learning apps depends on qualified teachers. The use of MTDs for foreign language instruction requires more than simply technology. It also depends on the development and learning of the teachers themselves (Barton & Dexter, 2020). Teachers must take the initiative to learn about these technologies to improve their capacity to integrate technology into their classrooms. For instructors to use these apps to their full potential, they must receive enough training (Barton & Dexter, 2020). They may receive additional assistance and resources from their school or organization, boosting their confidence in using technology in their instruction (Sub-theme 4.3). So, to assist instructors in using MTDs effectively in teaching foreign languages, proper training, personal development, and school support all function together (Bernacki et al., 2020).

Sub-Question Two

What are the barriers to the integration of MTDs and mobile applications by foreign-language instructors in the curricula as a way of enhancing self-efficacy? Themes 3 and 3.1 to 3.5 highlight various roadblocks that teachers may encounter when attempting to incorporate MTDs and their learning apps by foreign language instructors into the curricula. The distraction potential of MTDs, which could cause students to lose attention to their academic work, is one of the main challenges (Sub-theme 3.1). Several teachers, including M1_Japanese from College A and W1_French from College A, expressed concern that students would become overly absorbed in their devices and fail to pay attention to the lessons taught in class (Sub-theme 3.1). When expressing her desire for immediate student attention, W1_German from College B said, "I want my students to look at me, look at my face when I pronounce the word." W1_Spanish raised similar worries from College B, who noted that distractions could result from students occasionally using mobile apps unrelated to classes to explore online stores, games, or social media platforms. Access and resource restrictions are a further barrier (Sub-theme 3.2).

M1_Spanish from College A underlined how the lack of resources in a classroom context might be a significant barrier, while W3_Spanish from College A expressed difficulty accessing online components of educational material. W1_Arabic described Wi-Fi problems from College B, who noted that "Wi-Fi seems to be an issue sometimes. In the classroom, my Wi-Fi signal could have been stronger. Teachers may encounter obstacles such as poor Wi-Fi and a lack of appropriate technology tools," reducing their confidence and self-efficacy in implementing technology in the classroom (Bernacki et al., 2020). The lack of resources may hamper the development of their self-efficacy for successful technology integration in education.

When using MTDs in foreign language training, teachers also reported adaption problems (Sub-theme 3.3). Regarding tracking student progress with MTDs, M1_French from College B described the technology as occasionally an "annoying method of class instruction." At the same time, W3_Spanish from College A claimed that "most apps still require a human to track and grade whether an assignment was completed." Spanish majors W1_Spanish from College B and W3_Spanish from College A also voiced doubts about the effectiveness of particular educational software. The participants' views on integrating MTDs were conflicting, with some emphasizing the advantages of information access and student participation while others voiced worries about pace and distractions. As an illustration, College A student W3_Spanish complimented MTDs for "equalizing access to technology and allowing students to work independently as well as in teams." W1_German from College B was worried about how technology would affect instruction negatively if things didn't go according to plan. At the same time, W2_Spanish from College B emphasized the value of one-on-one interactions between teachers and students over a heavy reliance on technology (Sub-theme 3.4).

A significant issue was also inadequate teacher preparation (sub-theme 3.5). Several teachers cited needing more training and abilities to use technology for teaching effectively. It is easier for teachers to use tech tools in foreign language classes with sufficient access to technology and adequate training at work (Francom, 2019). W1_Chinese from College A stated, "There is a lack of access to technology and adequate training in my workplace, which leads to ineffective skills in using technology for teaching foreign language classes." They might need to learn how to use these tools in their teaching due to a lack of training. Learning and teaching may be less successful than they were.

Sub-Question Three

What is the perception of foreign-language instructors on the value of MTDs and mobile applications in enhancing self-efficacy among students? The view of including MTDs in foreign language curriculum is identified by theme five and sub-themes 5.1 to 5.3. All participants thought MTDs and associated learning apps were effective aids for raising students' self-efficacy. All participants agreed that MTDs improve language learning by raising student engagement, providing a varied range of instructional materials, and being time and cost-effective (Theme 5), which was covered under the benefits of operating and integrating MTDs. M1_Japanese from College A, W1_Spanish from College B, and W3_Spanish from College A all lauded the accelerated feedback process MTDs enable. W1_Spanish from College B stated that "it allows for instant and automatic correction," and W3_Spanish from College A highlighted their role in "fast feedback for students with self-scoring assignments and games, which they find very motivating." The panelists also emphasized the range of content that MTDs provide.

W3_Spanish from College A underlined the "wide range of content available in Spanish, which facilitates content sharing with teachers around the globe." At the same time, W1_Chinese from College A stressed that MTDs give "plenty of exercises to be done whenever and as many times as students want." M1_Japanese from College a states in The Improved Efficiency that MTDs are effective because they allow "students to research online or take a quiz online wherever they are and at their own pace." Using MTDs increases the classroom's effectiveness by allowing students to conduct research, take quizzes, and provide professors with immediate feedback (Guo et al., 2020). Listening activities also include adjustable capabilities like screen magnification, speed control, and multiple replays (Guo et al., 2020). The Better Language Practice (Sub-theme 5.2) is focused on how MTDs can encourage communication and language practice. According to W3_Spanish from College A, "automated games and worksheets allow

for lots of lower-stakes practice, which is excellent for foreign language learning speaking and word pronunciation." MTDs in the classroom improve the quality of language instruction. Students have additional opportunities to develop their language abilities since it enables different and engaging learning experiences (Habibi et al., 2019).

The sub-theme 5.3, "Interaction and Engagement," highlights how teachers have used technology to improve student interaction and engagement. MTDs, according to W1_Spanish from College B, ensure that "everyone becomes interested in learning and improving the language during classroom interaction." W1_Chinese from College a said students appear "more excited and more engaged when using their smartphones or laptops to look up information online." Overall, MTDs are seen by foreign language teachers as being very helpful in raising students' self-efficacy in language acquisition (Guo et al., 2020).

Outlier Data and Findings

No notable outliers were found throughout the investigation because the topics and questions closely matched the data gathered. The study's framework included unexpected findings, such as the importance of instructors' comfort levels with mobile technology in integrating MTDs into their curricula, the impact of students' attitudes and skill levels on technology implementation, and the adaptability of pedagogical methods to the introduction of mobile technology. These results were unexpected, but they added to the study's depth when they emerged. Each piece of information was seen as an essential component of the study, deepening and extending our knowledge of how mobile technology is perceived and used in foreign language training, regardless of how closely it related to the predetermined research objectives. As a result, no data were ignored or labelled as an anomaly.

Summary

The findings chapter's main goal was to describe the outcomes from interview responses, teacher prompts, and course readings. Findings demonstrate that when integrating mobile technology devices and associated learning apps into their curricula, foreign language instructors describe favorable lived experiences. MTDs and their learning apps are crucial to teachers' ability to offer effective classroom education. Most teachers, however, believe that a lack of training may adversely affect their readiness and willingness to incorporate MTDs and mobile applications into the curricula to boost students' self-efficacy. Along with issues with teacher preparation, obstacles, including limited Internet connection, a lack of Wi-Fi, and a lack of pertinent learning resources for mobile applications, may prevent teachers from becoming more competent and self-sufficient when integrating MTDs into the curriculum. Despite these difficulties, foreign language teachers generally view the utility of MTDs and mobile applications in boosting students' self-efficacy through reading, speaking, and listening. The key findings from the most recent research are presented in the following chapter.

CHAPTER 5: CONCLUSION

Overview

The purpose of this case study was to understand the integration of MTDs and their learning apps into foreign-language curricula by foreign-language instructors at two colleges in the Mid-Atlantic region of the U.S. In this chapter, the focus is to present a summary of key findings presented in Chapter 4 and interpret the data based on the self-efficacy theoretical framework and past literature findings on the topic. The chapter further presents implications for policy and practice, theoretical and empirical implications, identifies limitations and delimitations, and also provides recommendations for future research. The chapter concludes with a summary of key findings.

Discussion

The study uses Bandura's (1971) self-efficacy theory in the discussion part to comprehend and address the research issues. Individual self-efficacy is a major factor affecting instructors' readiness to use MTDs and related apps in foreign language curricula (Drajati et al., 2018; Muslem et al., 2018). Foreign language instructors frequently need more self-assurance and specialized training to implement new technologies in their courses. Integrating MTDs may need help in foreign language education at the college level due to insufficient training, limited technical expertise, and inadequate support from the Information and Communications Technology (ICT) community. Consequently, individuals with inadequate training exhibit diminished self-efficacy and a reduced inclination to incorporate novel technologies within educational settings (Adnan & Tondeur, 2018; Muslem et al., 2018). Collaboration among educational policymakers, school administrators, and mobile app developers may be imperative in effecting curricular reforms that facilitate technology integration in educational settings. This

collaborative effort should encompass essential resources such as equipment, professional development initiatives, and internet connectivity. Additionally, it should entail the creation of appropriate mobile applications that can be seamlessly integrated with traditional pedagogical approaches. The subsequent sections will additionally address the interpretation of the findings, the ramifications for policy or practice, the theoretical and empirical implications, the constraints and boundaries of the study, and recommendations for future research.

Summary of Thematic Findings

Ten foreign language instructors from College A and College B participated in the study, providing their insights via journal prompts and individual structured interviews. Data for the research was gathered through journal prompts, syllabi, and individual interviews. These three methods facilitated triangulation of the data to ensure its validity. Upon analysis, five primary themes, encompassing fifteen sub-themes, emerged. These themes and sub-themes have been identified in the preceding section.

Interpretation of Findings

This section includes a summary of materials from emerging themes and subthemes that were discussed in Chapter Four. Drawing from data gathered via journal prompts, document analysis (syllabi), and individual interviews, five themes and fifteen sub-themes were identified. The first theme is the "lived experiences," with sub-themes including "perceived importance of MTDs" and "self-efficacy." The second theme focuses on "adapting teaching methods to use MTDs." Its sub-themes highlight "facilitating reading, listening, and speaking" as well as "translation and dictionaries." The third theme describes "challenges experienced in integrating MTDs." It encompasses various sub-themes such as "disruptions in classrooms, " "accessibility of resources, " "adaptability issues," "class instruction, values, and students' learning," and "lack

of teacher training." The fourth theme is about "enhancing skills integration into curriculums." Its sub-themes revolve around "personal learning and research," "participation in training, " and "organizational support in technology training." The final, fifth theme presents "benefits of operating and integrating MTDs." Its sub-themes illustrate "improved efficiency," "better language practice," and "interaction and engagement." The interpretation of findings support and correlate with the research questions. The findings of this study demonstrated that the foreign language instructors at College A and College B saw MTDs and associated mobile applications as significant, beneficial, and efficient in assisting foreign language learning. The foreign language instructors said that including MTDs in the curriculum was crucial. Still, they were concerned about potential obstacles such as limited internet and Wi-Fi access, lack of resources, and lack of technology training. The interpretation of the results is offered in subsequent parts that concentrate on the study topics.

Interpretation # 1: **Educational Technology Efficacy**

In exploring the lived experiences of foreign language instructors utilizing MTDs and their learning apps in teaching, two core subthemes emerge: the perceived significance of MTDs and self-efficacy. The data gleaned from interviews resonates with M1_French's and M1_Spanish's sentiments, highlighting the indispensable role MTDs and their learning apps play in contemporary teaching, especially in making learning more tangible. Yet, the variance in self-efficacy, a term central to Bandura's theory, was evident, with instructors like W1_Chinese expressing hesitations due to practical barriers such as limited Wi-Fi access, while others like M1_French exhibited unwavering confidence in leveraging MTDs.

The importance of MTDs and their learning apps in language instruction is underscored across responses. The participants unanimously spoke to their transformative effects in the

classroom, from facilitating immersion in foreign cultures to simplifying the learning process. It mirrors broader literature, such as the study by Rizk & Davis (2021), which emphasize MTDs as potent learning tools both inside and outside the classroom, providing a bridge between educators and learners and enhancing overall engagement.

However, the concept of self-efficacy emerged as pivotal in determining how comfortably instructors navigated the digital landscape. Some, like W1_Arabic, exuded confidence, while others, like W1_Chinese and W3_Spanish, voiced apprehensions. Bandura's definition of self-efficacy pertains to one's beliefs in their capacities to execute tasks. It was reiterated by Pröbstl et al. (2020), suggesting that these beliefs critically influence determination and motivation. Hence, as Yang (2020) contends, lacking self-efficacy can hinder task execution. It is also reflected in research by Ningias and Indriani (2021) and Pantu (2021), suggesting a potential relationship between self-efficacy, age, linguistic proficiency, and technology use.

Connecting the data with the framework of self-efficacy and recent literature, it is clear that while technology, especially MTDs, holds transformative potential for education, its effectiveness is closely tied to educators' self-efficacy. A synthesis of the instructors' lived experiences and academic literature underlines the importance of fostering a robust sense of self-efficacy among educators to harness the full potential of MTDs in the classroom. It is especially pertinent given the ever-evolving nature of technology and its implications for modern pedagogy.

***Interpretation # 2*: Transformation**

MTDs in classrooms symbolize a pivot in modern education. As the data suggest, these tools are not merely being added to the teaching environment but are reshaping the very fabric of pedagogical methods. It shift is epitomized by educators like W3_Spanish from College A, who

harness MTDs for interactive, student-centric experiences, deviating from traditional teaching paradigms. The data further categorize the implications of MTDs into two pivotal sub-themes. First, MTDs enhance multifaceted linguistic abilities; as underscored by W1_French from College A, they offer students a tactile and interactive medium, bolstering their engagement and comprehension. The sentiment of MTDs enhancing student engagement and learning enjoyment was reinforced by M1_Japanese from College A. Second, MTDs serve as a bridge in linguistic comprehension, offering instant translations and detailed dictionaries. These tools, as cited by participants like W1_Spanish from College B, provide a nuanced understanding and application of languages.

Grounding these findings within Bandura's (1986) self-efficacy framework, there's a striking parallel between the confidence exhibited by educators and students in utilizing MTDs and the theory's emphasis on one's belief in navigating challenges successfully. These MTDs, as gleaned from the participants' feedback, bolster students' self-assurance in their linguistic pursuits. The alignment is not merely anecdotal; studies such as those by Durán-Bautista & Huertas-Malagón (2021), Pröbstl et al. (2020), and Yang (2020) echo the profound impact of technology on student self-efficacy. Smith et al. (2023) offer a holistic view, positing that positive attitudes toward technology-induced learning are integral to enhancing self-efficacy. In distillation, MTDs not only redefine teaching methodologies but also amplify learners' self-assurance, melding theoretical constructs with tangible linguistic mastery.

***Interpretation # 3*: Challenges of MTDs Integration in Teaching and Learning**

The study reveals concerns about using MTDs in foreign language classrooms. MTDs can come with several challenges like distractions, resource limitations, adaptability, their instructional role, and a critical need for teacher training. A significant hurdle is the foreign

language teachers' reluctance to use MTDs, mostly due to a perceived lack of training. Atabek's (2019) findings resonate with it, pointing out the gaps in tech-training for teachers. Similar concerns are evident in research from different regions like Turkey and Saudi Arabia (Özden, 2007). It is clear from expert like Peled (2020) that for a successful tech integration, teachers should be tech-savvy and also know how to weave these tools seamlessly into their lessons. A participant, W1_Chinese from College A, reinforced it by sharing their struggle with limited tech access and training.

Although MTDs have the potential to uplift the learning experience, they also serve as potential distractions. Research by Amez & Baert (2019) and Raja & Nagasubramani (2018) show that MTDs can divert attention, especially when students use them for activities like texting or browsing social media. W1_German from College B shared a similar experience. The lack of institutional support, highlighted by Asnawi et al. (2018), only makes the challenge tougher. Furthermore, incorporating tech in classrooms can deeply impact students' self-confidence and motivation, as shown by Honarzad and Rassaei (2019). It underlines the importance of a balanced approach, with respect to using MTDs effectively while nurturing students' confidence. In sum, blending MTDs with foreign language teaching mirrors the larger challenge of combining tech with traditional teaching. Despite MTDs'clear potential, the hurdles they bring are significant. To truly benefit from tech, our educational approach must holistically address these challenges, keeping student confidence at its heart.

***Interpretation # 4*: MTDs Elevating Teaching and Learning Excellence**

In exploring innovative methods to enhance foreign language teaching, the role of MTDs has emerged as paramount. The data reveal participants emphasizing personal learning strategies, peer collaboration, and organizational backing. Personal learning and research are prominent.

M1_French from College B's approach to refining technological skills through platforms like YouTube resonates with Bandura's self-efficacy theory, suggesting that one's self-belief shapes motivation and behavior. The idea of self-belief in utilizing MTDs is reaffirmed by W3_Spanish from College A and is supported by the literature, notably by Joo et al. (2018), who highlight the significance of self-efficacy in shaping teachers' perceptions of MTDs.

The data further underscore the necessity of MTDs training and skill testing. Testimonies from participants like W1_Spanish from College B emphasize the impact of consistent training on teaching efficacy. It aligns with the self-efficacy framework, where belief in one's capabilities translates to performance. Durak (2020) reiterate it, linking teacher actions such as lesson planning to technological self-efficacy. Comprehensive training thus equips teachers while amplifying their confidence in instructional methodologies.

Lastly, the call for organizational support in technological training is clear. Recognitions, like that from M1_Japanese from College A, underline the essential role of institutional backing in MTDs adoption. It is more than just resources; it is about nurturing a culture of self-efficacy. Djiwandono (2019) stress that discerning the nuances of teacher-student technology acceptance can craft better classroom strategies. Thus, holistic institutional support can bolster teacher self-efficacy, resonating with Yang (2020)' s thoughts on the bond between motivation, self-efficacy, and educational processes. In conclusion, the findings emphasize the intertwining of personal learning, support systems, and MTDs training in language teaching. Central to these elements is the critical role of self-efficacy, where teachers' confidence in their abilities directly influences educational outcomes. The notion is underscored by academic literature on MTD integration.

***Interpretation # 5*: MTDs-Empowered Pedagogy**

In modern language education, MTDs play a pivotal role. Insights from participants highlight themes of MTDs benefits, efficiency, improved language practice, and increased student engagement. These observations align closely with educational theory, notably Bandura's concept of self-efficacy. Starting with MTDs' benefits, participants noted their vast content range, quick feedback, and motivational boosts. W1_Spanish from College B's insight on "instant correction" mirrors Bandura's (1986) perspective: confident educators foster student mastery. It implies MTDs' swift feedback bolsters student confidence, foundational to self-efficacy. Additionally, MTDs' capacity to broaden language learning resonates with Mussa's (2020) view of learners deeply engaged in the learning journey.

Turning to efficiency and practice, the data echo key literature. MTDs' adaptability, tailoring unique learning paths, aligns with Mussa's (2020) insights on bridging educational divides. Their facilitation of genuine native interactions distinctly boosts language skills, a notion mirrored by Nuraenil et al. (2020), highlighting the platform's ease of use. The emphasis on increased interaction and engagement is evident. The enhanced bond between educators and students, as noted by participants, is reflected in academic writings. Habibi et al. (2019) stress the importance of integrating technology for pedagogical success.

Bandura's views on the impact of educators' beliefs shaping classroom environments stand out. When teachers maximize technology's potential, as indicated by Jannah et al. (2020), it fosters an atmosphere amplifying learning and instilling linguistic confidence. Here, MTDs transition from mere tools to powerful catalysts, strengthening learners' belief in mastering foreign languages. In summary, both educators and research highlight MTDs' pivotal role in enhancing language learning and boosting student confidence.

Implications for Policy and Practice

Teachers know how important MTDs are in increasing their pupils' confidence in learning foreign languages. Videos, translation tools, dictionaries, and games are among the many resources they offer that have been shown to dramatically improve language understanding and communication (Andujar et al., 2020). Teachers have noticed improvements in their students' fluency in a second language, as evidenced by their increased speaking skills, enhanced understanding of the course materials, and great assignment submissions. Adopting mobile applications, which provide students with essential resources for honing their language abilities, is critical to the advancement (Lai et al., 2022). Bandura's 1977 self-efficacy thesis states that hearing or observing native speakers boosts students' confidence. Social modeling's impact on self-efficacy, particularly in language learning, is unclear, so further research is needed.

MTDs are a helpful supplement to traditional teaching methods in studying foreign languages, enhancing student interest and academic results. According to teachers ' observations, pupils achieve a greater understanding of the target language as a result of employing these tools (Nikolopoulou, 2020). Additionally, technology in curriculum delivery encourages student engagement and focus, producing more engaging, interactive, and practical language learning experiences (Yunus et al., 2021). These enhancements in learning outcomes can be attributed to students' technology-enabled mastery experiences, by Bandura's (1977) observations. Despite these benefits, there are significant barriers to the widespread adoption of the technique because it is challenging to ensure access to MTDs, provide dependable internet connections, and make pertinent curriculum resources accessible on mobile platforms. These issues show the need for more study to develop workable solutions and ensure the appropriate use of MTDs in foreign language lessons.

Implications for Policy

At the administrative level, the study's findings showed that participants often use MTDs by putting knowledge they have largely acquired through independent research or knowledge they have shared with co-workers and I.T. support employees to use. Due to a lack of curriculum and policy guidelines for MTDs and associated learning apps, most participants may need help to support the digital endeavor. Guo et al. (2020) contended that the Ministry of Education's curriculum reform, the enhancement of course materials at teacher-training institutions, and support from school districts and administrators all substantially impact the amount of technology used in the classroom.

The primary focus should be on pedagogy and curricular standards for MTDs and their related apps for the U.S. Department of Education to establish a consistent approach to mobile technology installation and its assimilation into the learning process (Günbaş, 2022). Additionally, teacher preparation programs must provide pre-service teachers with strategies for delivering content using technology (Peled, 2020). Alternatively, teacher training organizations might offer courses in digital technology to assist seasoned educators in advancing their professional development and changing their negative perceptions about using MTDs in foreign language curricula. School districts and administrators must periodically educate teachers on the value of MTDs implementation through workshops, conferences, and support to increase their commitment (Peled, 2020)..

To ensure that their apps are user-friendly, accessible, and meet the various demands of learners, application developers should be led by specified rules and standards (Guo et al., 2020). They should collaborate closely with educators to guarantee their applications are pedagogically sound, follow curricular guidelines, and promote active and interesting learning. Moreover,

developers can more effectively bridge the gap between technology and education, ensuring a more seamless integration of their tools into classroom settings (Smith et al., 2019). As highlighted by Jones and Lee (2021), a collaborative approach between educators and developers often results in applications that are not only technically robust but also educationally impactful.

The advantages and potential risks of using MTDs must be explained to parents and pupils (Guo et al., 2020). To guarantee a balanced use of technology in education, it may entail developing policies on responsible use, setting screen time restrictions, and other related topics. Universities and colleges should offer parents and students clear avenues through which they can express their worries, offer suggestions, and participate in the decision-making process surrounding the use of technology in education (Guo et al., 2020).

The incorporation of MTDs into the curriculum undoubtedly holds transformative potential for modern education. However, such an integration must be underpinned by comprehensive laws and regulations, keeping in mind the myriad implications for all involved stakeholders (Beer & Mulder, 2020). The balanced approach ensures that we fully tap into the myriad educational benefits of technology without inadvertently introducing any associated risks or drawbacks. As observed by Smith et al. (2022), implementing stringent yet flexible guidelines can bolster the effectiveness of technological integrations in the classroom, leading to optimized learning outcomes. Moreover, educators, with the right legislative support, can be better equipped to navigate the complexities of technology adoption, as underscored by Beer and Mulder (2022).

Implications for Practice

The conversations between educators, administrators, and university I.T. highlighted that integrating MTDs into teaching practice offers specific obstacles. Due to the various capabilities

and setups of student devices, it is challenging to provide consistent training and support to students (Hoi et al., 2020). The variety wastes time and makes it difficult to offer educational content consistently. Additionally, teachers need more textbook-compatible educational apps for foreign language training to develop and deliver meaningful learning resources.

A deliberate strategy for developing applications specifically for foreign language instruction is required to overcome these barriers. Foreign language instructors must work with I.T. experts and application developers to provide a more focused and standard solution. A partnership of such nature could significantly aid in developing the digital curriculum. Collaboratively, they could produce valuable digital application content and a versatile teaching platform compatible with various devices, addressing challenges posed by the plethora of technologies.

The ramifications of the collaborative strategy for teaching practice are extensive. By removing the limitations imposed by different device capabilities and configurations, the creation of adaptive digital material and platforms could significantly improve the consistency of instruction (Hoi et al., 2020). Additionally, it allows educators to direct the development of educational apps per their own instructional goals and curriculum standards (Hoi et al., 2020). In addition to improving teaching methods, the collaboration between educators and developers would also improve students' learning opportunities regardless of the technology they use (Hoi et al., 2020). Consequently, a thorough grasp of these consequences is required for MTDs to be successfully integrated into teaching practice and for digital curriculum development to advance.

Empirical and Theoretical Implications

This section delves into the study's empirical and theoretical connotations surrounding the use of MTDs and their learning apps in foreign language instruction. Utilizing Bandura's self-

efficacy theory (Bandura, 1977, 1986) as a foundation, the study frames the varied experiences of educators, highlighting the transformative nature and challenges of MTDs. Through comparison and contrast with established literature reviews, the study elucidates distinct nuances, emphasizing the need for further exploration in areas such as technology-driven challenges, educator self-efficacy, training needs, and pedagogical shifts in modern classrooms.

Empirical Implications

The widespread incorporation of MTDs and their learning apps into foreign language classrooms is indicative of a paradigm shift in modern education. As evidenced by shared experiences, the perceived indispensability of MTDs is consistently reinforced. Teachers such as M1_French from College B and M1_Spanish from College A underscore the tangibility and cultural immersion that MTDs introduce to the learning process. Contrastingly, existing literature reviews, such as Buabeng-Andoh (2021), emphasize technology acceptance, hinting at the broader implications of MTDs beyond language learning and aligning with the thematic prominence of MTDs in the classroom. However, the data also reveals the necessity of diverse, multimedia engagement through MTDs, ranging from the Voice Record app's transcription to interactive games. This eclectic use substantiates the claims of Chisango et al. (2020), who note students' varied uses of technology, from YouTube for procedural tasks to Facebook for networking.

However, the marriage of technology and pedagogy is not without its challenges. While MTDs usher in a wave of novel engagement methods, issues such as inaccurate translations, student distractions, and the occasional abandonment of traditional teaching methods emerge, as observed across instructors from Colleges A and B. It aligns with existing literature, where Amez and Baert (2019) articulate concerns about the overwhelming proliferation of digital content, and

Zhang et al. (2020) point to off-task behavior as a challenge. Yet, amidst these obstacles, there's a resounding emphasis on the need for training, both self-paced and collaborative. Instructors from both colleges highlight a blend of independent research and collaborative learning as they navigate this tech-infused pedagogical landscape. Such sentiments find echoes in the literature, with Zhang et al. (2020) and Fernández-Batanero et al. (2019) emphasizing the necessity for educators to comprehend and effectively integrate technology's nuances.

Comparatively, the most significant point of divergence between the study and the existing literature review lies in the theory informing the topic. The literature review speaks to a more generalized understanding of technology adoption, like Prensky's (2001) distinction between "digital natives" and "digital immigrants." In contrast, the study predominantly focuses on the specific integration of MTDs in foreign language instruction. However, when viewed in the light of Zhang et al. (2020), who discusses the unique behavioral tendencies of modern learners, a clear intersection emerges. Both literature and the study reiterate the importance of MTDs in addressing the evolving needs of today's learners.

One cannot overlook the study's novel contribution in showcasing the practical, classroom-level integration of MTDs, moving beyond the broader theoretical assertions present in the literature. For instance, while Buabeng-Andoh (2021)broadly discuss variables predicting educational technology adoption, the study delves deeper, providing tangible instances like M1_Spanish's tech tool preferences or W1_French's use of visuals. Similarly, while Djiwandono (2019) discusses the importance of educators staying updated, the study showcases real-world instances of teachers turning to platforms like YouTube or the App Store for insights.

Moreover, the study sheds new light on the convergence of MTDs with traditional teaching, providing a fresh perspective on their complementary nature. While existing literature

like Aldholay et al. (2018) and Zhang et al. (2020) extol the benefits of technology in increasing student engagement, the study provides a microscopic view, detailing how these tools align with and enhance traditional pedagogical methods. In conclusion, while the study corroborates several themes evident in the literature, such as the transformative potential of MTDs and the challenges they bring, it extends the narrative by offering detailed, experiential insights into their real-world applications. The juxtaposition of these detailed classroom experiences against broader theoretical perspectives accentuates the study's unique contribution to the field, illuminating the nuanced interplay of MTDs in modern foreign language classrooms.

Theoretical Implications

Foreign language instructors has witnessed a significant metamorphosis with the integration of MTDs. They are increasingly realizing the indispensable role MTDs play in modern pedagogical practices. Two salient subthemes surface from their shared experiences: the perceived significance of MTDs and educators' self-efficacy in employing them. It raises the essential question: How does this data align with existing literature, particularly the “Self-Efficacy theory”? Self-efficacy, as proposed by Bandura (1977, 1986), underscores an individual's belief in their capacity to execute tasks and navigate different situations. This theory finds resonance in the teaching fraternity's varied comfort levels with MTDs. While some educators seamlessly integrate technology, emphasizing its transformative potential, others express reservations, primarily stemming from self-efficacy discrepancies. In the words of Pröbstl et al. (2020), self-efficacy directly influences an individual's determination, motivation, and mindset, making it a pivotal determinant in the MTDs integration success.

The sweeping rise of MTDs in foreign language instruction, as illustrated by varied teacher testimonies, dovetails with previous research on the connection between technology and

self-efficacy. Pröbstl et al. (2020) drew a clear link between self-efficacy and technology incorporation. They speculated that age and linguistic proficiency could potentially affect this nexus. Similarly, our data presents anecdotal evidence of a possible generational divide in MTDs acceptance. M1_Japanese and W1_German's emphasis on the practicality of MTDs might be juxtaposed with the findings of Fernández-Batanero et al. (2019), who pinpointed that technology-based activities boost self-efficacy and self-directed language learning.

A deeper look into the data reveals challenges, chiefly the shift from traditional methods, distractions, and training deficits. The concern surrounding adequate training echoes Yang (2020)'s sentiment, where individuals without sufficient self-efficacy can lose confidence.

Moreover, Rahmania (2020) hinted that a paradigm shift in learning environments, like the surge in online learning due to the COVID-19 pandemic, might disrupt students' self-efficacy. The educators' shared experiences are a testament to this notion, as many grapple with the rapid technology integration pace. Comparatively, the transition to technology-rich environments brings forth novel teaching and learning strategies. Tavakoli et al. (2019) discerned that students' active participation in online education settings heightened their self-efficacy. It aligns with the collaborative methods mentioned in our data, where educators lean on more tech-savvy peers for guidance on MTDs, underscoring a collective effort to optimize technology's advantages.

Furthermore, Balaman (2020) emphasized the role of mastery experience, arguing that accomplishments in tech-integrated environments bolster students' self-efficacy. This can be paralleled with teachers using various MTDs strategies, from voice recording apps for feedback to simulation of real-life scenarios. The act of experimenting, understanding, and mastering these applications undeniably contributes to enhancing educators' self-efficacy.

However, while my study predominantly supports the prevailing literature, it diverges in highlighting the more practical, on-ground challenges faced by educators. The theoretical framework often emphasizes students, but the collective experiences of teachers unravel a different facet of the self-efficacy debate (Tavakoli et al., 2019). It is not just about the students' ability to learn in tech-infused environments, but also the educators' self-belief in teaching through them (Tavakoli et al., 2019).

My study corroborates and extends existing research by placing educators at the epicenter of the self-efficacy and technology debate. While the transformative potential of MTDs is universally acknowledged, educators' varied self-efficacy levels underscore the need for tailored training and support (Pröbstl et al., 2020). As Bandura posited, self-efficacy is an interplay of skills, knowledge, and conviction. As the realm of foreign language instruction evolves, ensuring educators' robust self-efficacy becomes paramount, ensuring they can harness MTDs' full potential and sculpt a dynamic, immersive learning environment for their students.

Limitations and Delimitations

In qualitative research, distinguishing between inherent limitations and intentional delimitations is crucial. Theofanidis and Fountouki (2018) point out how uncontrollable factors can significantly influence research outcomes. This study's limitations surface in its data source choices, centering primarily on foreign language instructors from a public college and a private university in the Mid-Atlantic region. Regional specifics might influence the gathered insights, and relying solely on interviews as the data collection method could restrict the study's comprehensiveness. On the other hand, delimitations, outlined by Coker (2022) and Theofanidis and Fountouki (2018), denote researcher-imposed boundaries, often influenced by factors like time constraints. While such decisions streamline the research process, they also potentially

constrict its reach, emphasizing the need to interpret findings within these parameters. Recognizing both these elements is key to understanding current research gaps and areas that merit further exploration (Ross & Bibler Zaidi, 2019).

Limitations

The study's design encompassed specific limitations which might shape its outcomes. Predominantly, the research procured its data from foreign language instructors within two American institutions situated in the Mid-Atlantic region. A noteworthy limitation lies in the lack of data triangulation. By majorly depending on instructor feedback without the inclusion of viewpoints from individuals such as administrators, board members, or education officials, the comprehensive nature and authenticity of the findings might be at risk. Moreover, the decision to rely solely on interviews as the primary data collection method might not present a holistic view of the subject, emphasizing the potential benefits of diverse research tools. Another considerable constraint is the emphasis on public institutions to the detriment of private ones. This selective focus insinuates that the findings may not seamlessly translate to the context of private educational establishments, thus creating a gap in universal applicability.

To further elaborate on the limitations, the study's reliance on feedback from specific geographic and institutional settings might inherently contain biases or unique perspectives that aren't universally representative. Regional educational practices, policies, and even cultural nuances can vary, which might influence instructors' perceptions and experiences. Additionally, by not diversifying data collection methods, some intricate details or underlying sentiments that other tools might capture remain elusive. Such limitations underline the importance of broader, more diversified research endeavors in the future.

Delimitations

The study was framed with specific delimitations, intentionally determined to streamline the research process, but which inevitably shaped its breadth and depth. A central delimitation was the geographic focus, exclusively targeting foreign language instructors within two counties of the Mid-Atlantic region. The rationale behind this demarcation was the locations' accessibility, yet this convenience also encapsulates a potential shortcoming in terms of wider applicability. Regarding data acquisition, the instruments were primarily interviews, prompts, and any syllabi that were at hand, overlooking potentially richer data streams like questionnaires, classroom observations, or focus groups. Time restrictions predominantly fueled this methodological choice.

Building on the delimitations, it's worth noting that while the decision to focus on specific locations facilitated logistics, it simultaneously potentially filtered out a myriad of experiences from other regions. The reliance on a small pool of readily available data collection tools, due to time constraints, might not fully encapsulate the dynamism of foreign language instruction. Furthermore, the limitation to a mere ten instructors offers a narrow window into the world of foreign language teaching, making it essential to interpret findings within these defined parameters. It reinforces the premise that delimitations, while necessary for research manageability, also demarcate the boundaries of its implications.

Recommendations for Future Research

Future studies on integrating MTDs and their learning apps into foreign language curricula must address the constraints and delimitations in the existing research to produce more representative and valid findings. (Almekhlafi & Almeqdadi, 2020) noted that a large research gap exists due to the small sample size utilized in many studies, which frequently confine their

sample to a localized or particular group of foreign language instructors. Future studies should aim for a more representative and diverse sample that spans the Mid-Atlantic area and even the entire country to close the gap. By eliminating geographical bias and increasing their adaptability to varied situations, the greater representation would increase the trustworthiness of the findings (Hegelheimer & O'Bryan, 2019). For a thorough understanding of the ramifications and viability of MTDs integration into foreign language courses, it is also essential to consider the perspectives of many stakeholders, such as school administrators, I.T. departments, and mobile application developers (Thomas, 2021).

Second, the studies' methodological robustness needs to be improved. As Gleason and Manca (2020) suggested, Triangulating data-gathering techniques can assist in achieving it. A deeper and more nuanced dataset can be produced by combining different data collection techniques, such as focus groups, field observations, journal prompts, syllabi, and questionnaires with interviews. The validity and depth of the insights gained would both be improved by the multi-method approach.

Last but not least, increasing data collection to larger samples is important to improve the generalizability of the results. It would be easier to conduct representative sampling and ensure that the results apply to a wider context if surveys distributed to foreign language instructors and universities were used (Al-Maroof et al., 2021). In conclusion, filling in these research gaps can lead to a more thorough and solid knowledge of the influence and role of MTDs in foreign language learning, which could guide more effective policy decisions, curriculum development, and teaching methods.

Conclusion

The increasing ubiquity of mobile technology devices, especially smartphones, tablets, and laptops in the educational sphere heralds a transformative shift in teaching and learning paradigms. The study delved into the integration of MTDs and their learning apps in the foreign language instruction landscape at two Mid-Atlantic U.S. colleges. The qualitative investigation encompassed ten foreign language instructors at College A and College B and employed diverse data collection methods, including journal prompts, document analysis (syllabi), and individual interviews.

One pivotal finding, rooted in Bandura's self-efficacy theory, accentuates the instructor's confidence as instrumental in adopting and effectively deploying MTDs in the classroom. Enhanced engagement, up-to-date materials, and immediate linguistic support emerge as the unequivocal advantages of MTDs. However, challenges loom large, from the distractions these devices can introduce in classrooms to resource constraints and the overarching need for advanced teacher training in technology (Au & Rahmat, 2019). The most salient takeaway underscores the profound influence of training in technology integration. Adequate training not only boosts teachers' job satisfaction and performance but crucially elevates their self-efficacy in using MTDs, as posited by Pröbstl & Schmidt-Höni (2020). Yet, the spectrum of instructor experiences with MTDs varies, often predicated on personal beliefs, values, or the quality of training received.

To harness the full potential of MTDs in language instruction, a comprehensive, multi-pronged strategy is imperative (Günbaş, 2022). It encompasses refining teaching methods, setting clear curricular standards, and fostering synergies between educators and app developers. Moreover, as MTDs become an inextricable part of the modern classroom, both educators and

students must adeptly navigate the technology, ensuring it remains a tool for education, not distraction. The evolution of foreign language instruction hinges on the harmonious integration of technology, pedagogy, and belief in its transformative power.

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Appendix A

LIBERTY UNIVERSITY

INSTITUTIONAL REVIEW BOARD

January 10, 2023

Bellisa Reichelt
Matthew Ozolnieks

Re: IRB Exemption - IRB-FY22-23-551 College-Level Foreign Language Instructor's Perceptions in The Incorporation of Mobile Technology Devices and Their Learning Applications in Curricula: A Collective Case Study

Dear Bellisa Reichelt, Matthew Ozolnieks,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA. CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix B

Email Communication from Two Research Sites

Communication with Site A:
From: [redacted] deMedicis <[redacted]>
Sent: Tuesday, March 9, 2021 11:01:21 AM
To: Reichelt, Bellisa <[redacted]>
Subject: RE: [External] Research Request

If you receive IRB approval from Liberty, you may recruit our faculty to participate. Of course, I cannot guarantee their participation. Have a great day.

Communication With Site B:
From: Miller[redacted] <[redacted]>
Sent: Wednesday, April 28, 2021 8:15 AM
To: Reichelt, Bellisa <[redacted]>; [redacted]
Subject: RE: Seeking for Conducting Interviews-Survey for My Dissertation Proposal in Education

Good morning Bellisa,

I approve of your use of the Department of Modern Language residential faculty for your study. We currently have 20 residential faculty members (10 of which are adjuncts) but two of them will be leaving after this term ends, so it may be useful to have another pool of participants as you can't count on everyone's participation. There also is some overlap between our residential and online faculty but the online faculty is under Jamaica Conner's purview and will require her approval.

Dr. [redacted] Miller
[redacted]
(434) 582-2448

Appendix C

Recruitment Email

Dear Foreign Language Instructors:

As a Ph.D. candidate in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to understand how mobile technology devices (MTDs) and their learning applications (apps) are used by foreign language instructors, their comfort level, experience, and understanding of MTDs being applied in the curriculum to teach foreign languages, and I am writing to invite eligible participants to join my study.

Participants must be between 27 and 67 years old, full-time, part-time, or adjunct foreign language instructors, have at least one year of experience in teaching foreign languages, and have experience of using technology devices as part of teaching foreign language classes (no specific number of years for using MTDs for teaching).

Willing participants that were part of my research study and are eligible for my research study, were asked to do the following items:

1. Participate in an audio- and video-recorded interview via TEAMS or Zoom (It should take approximately 40-60 minutes per person).
2. Complete 5 short journal prompts and return it to me via email within 7 days (It should take approximately 10-15 minutes to complete all the prompts).

3. Email me their foreign language class syllabus.
4. Review your interview transcripts to ensure accuracy (It should take approximately 10-20 minutes per person).

Names and other identifying information of participants were requested as part of this study, but the information will remain confidential.

To participate, please complete the attached screening survey and return it to me via email. If you are eligible I will contact you to schedule an interview.

A consent document is attached to this email. The consent document contains additional information about my research. If you are eligible, and you choose to participate, you will need to sign the consent document and return it to me via email before the start of the interview.

Participants will receive a $50 Target e-gift card within 72 hours of completing the following items: submission of your class syllabus, journal prompts, and the audio or video interview. Because participation in research is voluntary and participants have the right to end their participation during the study if they so choose, compensation were staggered based on the section they complete. The participants who submit only syllabus will receive $5 Starbucks e-gift card within 72 hours. The Participants who complete only his/her journal prompts and return it to me will receive $10 Starbucks e-gift card within 72 hours. The participants who complete only his/her individual interview will receive $20 Starbucks e-gift card within 72 hours.

Sincerely,

Bellisa Reichelt, *MSW, MSHS, LMSW, QMHP-A*

[redacted]

Appendix D

Informed Consent

Title of the Project: College-Level Foreign Language Instructor's Perceptions on the Incorporation of Mobile Technology Devices and Their Learning Applications in Curricula: A Collective Case Study

Principal Investigator: Bellisa Reichelt, Doctoral Candidate, School of Education, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be between 27 and 67 years old, full-time, part-time, or adjunct foreign language instructors, have at least one year of experience in teaching foreign languages, and have experience of using mobile technology devices (MTDs) as part of teaching foreign language classes (no specific number of years for using MTDs for teaching). Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to understand the integration of MTDs and their learning apps into foreign-language curriculum by foreign-language instructors at two colleges in the Mid-Atlantic region of the U.S. At this stage in the research, the integration of MTDs and their learning apps into foreign-language curriculum will be generally defined as capability of understanding and

incorporating MTDs and their learning apps into the classroom. This research aims to provide insight into how college-level foreign language teachers view and incorporate mobile devices and apps into their teaching and personal learning.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Participate in an audio- and video-recorded interview via TEAMS or Zoom:
   The interview should take approximately 40-60 minutes per person.
2. Complete 5 short journal prompts and return it to me via email within 7 days. It should take approximately 10-15 minutes per person to complete the journal prompts and send it to my Liberty email address.
3. Email me your foreign language class syllabus.
4. Transcript Review: Interview transcripts will be returned to you via your email address to check for accuracy and resonance with their experiences. You can review and edit the interview transcripts on the editable Word document. It should take approximately 10-20 minutes per person to review and make corrections.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from participating in this study. Benefits to society include as follows: 1. My research study will help improve teaching and learning outcomes. 2. It will increase public knowledge on integrating MTDs and their learning apps into foreign language curricula. 3. It will also increase engagement and motivation for students who learn foreign languages. 4. Encouraging teamwork and collaboration. 5. Preparing

students for life after graduation. 6. Connecting teachers and students as well as students and students in teaching and learning environment.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify the participants. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential by replacing names with codes. For example, M1_French_Prompts, M1_French_Interview, W 2_Italian_Syllabus, and W2_Thai_Prompts. Interviews will be conducted in a location where others will not easily overhear the conversation.
- Data collected from you may be used in future research studies and/or shared with other researchers. If data collected from you is reused or shared, any information that could identify you, if applicable, will be removed beforehand.
- The printouts of the data will be stored/kept in a secure lockbox for 3 years in my office at home. Electronic data will be stored in my password-locked computer at home (only the researcher can access to my computer). After 3 years, the printouts of the data will be destroyed/shredded and electronic data will be deleted from my computer.

- Recordings will be stored on a password locked computer for three years and then deleted/erased. The researcher will have access to these recordings.

How will you be compensated for being part of the study?

Participants will be compensated for participating in this study. You will receive a $50 Target e-gift card within 72 hours of completing the following items: submission of your class syllabus, journal prompts, and the audio or video interview. Any participant who chooses to withdraw from the study after beginning but before completing all study procedures will not receive a compensation. Because participation in research is voluntary and participants have the right to end their participation during the study if they so choose, compensation will be staggered based on the section they complete. The participants who submit only syllabus will receive $5 Starbucks e-gift card within 72 hours. The Participants who complete only his/her journal prompts and return it to me will receive $10 Starbucks e-gift card within 72 hours. The participants who complete only his/her individual interview will receive $20 Starbucks e-gift card within 72 hours. Email addresses will be requested for compensation purposes. The Target e-gift card or Starbucks e-gift card will be sent to the participants' emails with 72 hours after I receive the submission(s) of the document (s).

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University or Germanna Community College. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Bellisa Reichelt. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [redacted] You may also contact the researcher's faculty sponsor, Dr. Matthew Ozolnieks, at [redacted]

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, [redacted]

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to audio-record and video-record me as part of my participation in this study.

_____

Printed Subject Name

_____

Signature & Date

Appendix E

Research Questions

Central Research Question

What are the lived experiences of foreign language instructors implementing mobile technology devices and their learning applications in their curriculum? CQ

Sub-Question One

How does foreign language instructor training influence the preparedness and willingness of foreign-language instructors in integrating MTDs and mobile applications within the curricula to enhance self-efficacy among students? SRQ1

Sub-Question Two

What are the barriers to the integration of MTDs and mobile applications by foreign-language instructors in the curricula as a way of enhancing self-efficacy? SRQ2

Sub-Question Three

What is the perception of foreign-language instructors on the value of MTDs and mobile applications on enhancing self-efficacy among students? SRQ3

Appendix F

Journal Prompts

1. How do you describe the importance of using MTDs and their learning applications in the foreign-language curriculum as a foreign-language instructor? CQ and SQ3
2. How do you describe your self-efficacy as a foreign-language instructor to integrate MTDs and their learning applications into the classroom? CQ
3. How do you adapt your teaching methodology to use MTDs and their learning applications for teaching foreign language classes as a foreign language instructor? SQ1
4. How do you describe potential challenges of integrating MTDs and their learning applications into the curriculum as a foreign-language instructor? SQ2
5. How do you improve or enhance your skills integrating MTDs and their learning applications into the curriculum as a foreign-language instructor? SQ3

Name of Participant……

Language Class Your Teach……..

Date of Completion……..

Appendix G

Individual Interview Questions

1. Please describe your experience teaching foreign language with the integration of MTDs through your current teaching position. CQ

2. What kind of technology integration strategies, methods, or techniques are most important and most effective for you to use in teaching your foreign language class? SQ1

3. How do you describe the importance of using MTDs and their learning apps in foreign language curriculum? SQ1

4. How do you describe your self-efficacy as a foreign-language instructor to integrate MTDs and their learning apps into the classroom? SQ1

5. Please share any challenges you may have experienced when operating and integrating MTDs and their learning applications into the classroom? SQ2

6. What are the perceived weaknesses in using technology integration for teaching your foreign-language classes? SQ2

7. What are the potential challenges of integrating MTDs and their learning applications into your foreign language class instruction? SQ2

8. How do the challenges of integrating MTDs affect your class instruction, values, and students' learning? SQ2

9. Please share any benefits you experienced when operating and integrating MTDs into the classroom? SQ3

10. What are the perceived strengths in using technology integration for teaching your foreign language classes? SQ3

11. How do you improve or enhance your knowledge and skills of integrating technology into your classroom? SQ3

12. What other competencies are beneficial when implementing MTDs and their learning applications to teach foreign-language classes? SQ3

13. How does your organization provide support for technology integration into your classroom? SQ3

14. If you were the leader of your organization, what would you do to improve and enhance teachers' knowledge and skills in integrating MTDs and their learning apps into foreign language classes? SQ3

Appendix H

Reflexing Journal

Benefits of MTDs	M1_French from College B believes that incorporating technology such as laptops, smartphones, and other advanced devices into foreign language classes is not only necessary but crucial in today's society. The use of mobile technology can enhance the learning experience, making it more engaging, effective, and relevant. From my observations, students tend to be more motivated to learn when they can utilize their device to research and explore topics related to their studies.
Benefits of MTDs	M1_Spanish from College A believes that incorporating MTDs as a tool for foreign-language instruction allows for a more tangible learning experience. In our current interconnected world, it is essential to utilize technol ogy to bring different cultures into the classroom. This immersive approach transforms students from passive learners into active participants, resulting in a more effective acquisition of the foreign language.
Benefits of MTDs	W1_spanish from College B has come to the conclusion that incorporating MTD's and their learning applications into the foreign language curriculum can greatly enhance the learning process by making it easier, faster, and more engaging for the learner.
High self-efficacy	W1_Arabic from College B does not believe that she faces problems using mobile technology and language apps for teaching her language class. She feels comfortable to use laptop and smartphone including apps.
High self-efficacy	M1_French from College B is more confident with using laptop and iPhone, recognizing their potential as valuable tools in the

	classroom. He has gained a thorough understanding of how to properly operate these devices, including the ability to search for and download various applications from the App Store or Market Place.
High self-efficacy	W3_Spanish from College A does not feel fully comfortable with using technology as part of teaching-learning. She feels that she needs to learn more how to integrate technology into the classroom more effectively.
Barriers to decrease self-efficacy in using MTDs	W1_Chinese from College A thinks that integrating technology into her classes poses a challenge due to the restricted availability of WiFi, which canno t be accessed in all classroom settings.
Low self-efficacy	W2_Spanish from College B mentions that she is an old-fashioned schoolteacher but still wants to connect with my students but through the use of technology as well. I am learning to type along with listening to audio, VDOs, or speech.
Low self-efficacy	W1_French from College A believes that may struggle with utilizing certain functions of language applications. However, upon dedicating time and effort towards understanding these features, she was able to gain a deeper understanding and confidence in implementing these tools within the classroom setting.
Low self-efficacy	W1_Spanish from College B feels that it is not easy to integrate them to her classes since in technology is not fully integrated into the classroom.
Low self-efficacy	W1_German from College B feels that it is difficult to determine which apps are suitable for foreign language instruction using mobile technology devices. The adaptability of these devices and potential unreliability may pose challenges for teachers trying to incorporate them into their teaching.

Low self-efficacy	W1_Chinese from College A mentions that lack of teacher training and skills development further hinders any efforts of integrating MTDs and their applications in the classroom.

Appendix I

A Screening Survey for Participating in the Research Study

COLLEGE-LEVEL FOREIGN LANGUAGE INSTRUCTOR'S PERCEPTIONS ON THE INCORPORATION OF MOBILE TECHNOLOGY DEVICES AND THEIR LEARNING APPLICATIONS IN CURRICULA: A COLLECTIVE CASE STUDY

Dear Foreign language instructors

[name of the research site]

Please fill out and complete this screening survey and return it to me at my Liberty University email address.

1. Name: …….

2. Age:…….

3. Gender:…….

4. Ethnicity and Religion Background:……

5. Are you able to understand written and spoken English language?.....

6. Type of position at your language department (e.g., full-time, part-time, adjunct position):……...

7. What a foreign language course do you teach at your academic institute (e.g., German, French, Spanish, Chinese, or other languag)?…….

8. Length of time of teaching foreign language at your college or university:…….

9. Type of mobile technology devices (e.g., iPhone, iPad, computer, laptop, or other mobile technology devices) and their learning applications (google translate, Rosetta Stone, Duolingo, or other language applications) do you integrate into your foreign language classroom and curriculum:……

10. Your valid email address: …….

11. I am interested in being a participant in this study: Yes……. No…….