ESL Teachers' Perceptions of Online Teacher Professional Development and Its Barriers in UAE Public Schools

تصورات معلمي اللغة الإنجليزية للتدريب المهني عبر الانترنت وعوائقه في المدارس الحكومية في دولة الامارات العربية المتحدة

by

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ABSTRACT

This study aimed to investigate the perceptions of English as a Second Language (ESL) teachers towards Online Teacher Professional Development (OTPD) and its perceived barriers in public schools in the UAE. Specifically, the study sought to determine how much teacher characteristics, such as years of experience, gender, and pedagogical and technological background, influenced these perceptions.

A quantitative survey methodology was employed to collect data from 300 ESL teachers in public schools. The collected data were analyzed using descriptive and inferential statistics to answer the three research questions.

The study found that ESL teachers in public schools in the UAE had positive perceptions of OTPD. The perception of OTPD was significantly influenced by their pedagogical background and years of experience, while gender and technological background had no significant influence. The study also identified the repetition of topics as the most important perceived barrier to OTPD, which was not previously reported in the literature.

The findings highlight the importance of sustained, high-quality teacher professional development to enhance student learning outcomes in public schools in the UAE. The study recommends OTPD programs be designed and implemented with consideration for individual teacher characteristics and aligned with curricula to address the identified barriers. The study contributes to the literature by providing insights into ESL teachers' perceptions of OTPD in the UAE and its perceived barriers. It also recognizes the importance of individualizing OTPD programs to address specific teacher characteristics.

ABSTRACT (in Arabic)

هدفت هذه الدراسة إلى التحقيق في تصورات معلمي اللغة الإنجليزية كلغة ثانية تجاه التطوير المهني للمعلم عبر الإنترنت والعوائق المتصورة في المدارس الحكومية في الإمارات العربية المتحدة. على وجه التحديد، سعت الدراسة إلى تحديد مدى تأثير خصائص المعلم، مثل سنوات الخبرة والجنس والخلفية التربوية والتكنولوجية، على هذه التصورات.

تم استخدام نهج كمي باستخدام منهجية المسح لجمع البيانات من 300 معلم لغة انجليزية في المدارس الحكومية. تم تحليل البيانات التي تم جمعها باستخدام الإحصاء الوصفي والاستنتاجي للإجابة على أسئلة البحث الثلاثة المقدمة في الفصل الأول.

وجدت الدراسة أن معلمي اللغة الإنجليزية كلغة ثانية لديهم تصورات إيجابية عن التنمية المهنية عبر الانترنت. تأثر مفهوم التنمية المهنية عبر الانترنت بشكل كبير بخلفيتهم التربوية وسنوات خبرتهم، في حين لم يكن لجنس المعلم والخلفية التكنولوجية تأثير كبير. حددت الدراسة أيضًا تكرار الموضوعات باعتباره أهم حاجز متصور أمام التنمية المهنية عبر الانترنت، والذي لم يتم الإبلاغ عنه مسبقًا في الأدبيات.

وتسلط النتائج الضوء على أهمية التطوير المهني المستمر وعالي الجودة للمعلمين لتعزيز نتائج تعلم الطلاب في المدارس الحكومية في الإمارات العربية المتحدة. توصي الدراسة بتصميم برامج التنمية المهنية عبر الانترنت وتنفيذها مع مراعاة خصائص المعلم الفردية ومواءمتها مع المناهج الدراسية لمعالجة العوائق التي تم تحديدها. تساهم الدراسة في الأدبيات من خلال تقديم رؤى ثاقبة لتصورات معلمي اللغة الإنجليزية كلغة ثانية تجاه التنمية المهنية المقدمة عبر الانترنت في دولة الإمارات العربية المتحدة والعوائق المتصورة. كما تحدد أهمية تخصيص برامج التنمية المهنية عبر الانترنت لتتناسب مع خصائص المعلم المحددة.

DEDICATION

I dedicate this dissertation to the memory of my beloved father, Saleem Mohammed Alarafeen. He not only raised me but also instilled in me the values of hard work, perseverance, and determination that have guided me throughout my life. He was not just a father but also a mentor, a teacher, and a friend who always encouraged me to pursue my dreams and to do what I love.

My father was a renowned educator and a talented curriculum designer, who authored and co-authored numerous textbooks that have benefited countless students. His unwavering dedication to education and his passion for teaching have been an endless source of inspiration for me.

Although he is no longer with us, his legacy lives on through his teachings and the impact he had on the lives of so many. This dissertation is a tribute to his memory, and a testament to the invaluable lessons he taught me. I will forever cherish the memories of my father and strive to make him proud by living up to the high standards he set for me.

ACKNOWLEDGEMENTS

I am deeply grateful to my wife, Ala, who has believed in me and has always encouraged me to pursue my dream and has been always there for me supporting and cheerleading, my children, Taleen, Jana, Reem, Sami, and Sama, who embraced me with their love and affection. The joy and happiness I receive from my family have been a constant source of inspiration and motivation, which enabled me to stay focused and determined during challenging times.

I would also like to express my heartfelt appreciation to my dissertation supervisor, Professor Christopher Hill, for his unwavering support and guidance throughout the process of researching and writing my dissertation. His valuable feedback and constructive criticism greatly contributed to the successful completion of my work.

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Chapter 1 Introduction

1.1 Research Background

In search of high-quality education, the government of the UAE is determined to improve the level of education by acknowledging that the current offerings are not up to their desired standards. For example, the rankings by the Global Competitiveness Index show that the quality of education in the UAE is falling behind. This supports the necessity of implementing effective and adaptable plans to rectify this declining pattern, (Al Ahbabi 2017). Despite this, the UAE government is dedicated to allocating additional resources for the development of both new and experienced teachers, as it is considered a crucial factor in improving education and promoting a transition from an economy based on oil to one based on human resources ((AlGhawi 2017). While the UAE has achieved success in certain areas of Teacher Professional Development (TPD), Buchner, Chedda and Kindreich (2016) identified several important issues and concerns that were raised by teachers in their study. These concerns included teachers' satisfaction with mandated professional development programs, relevance, repetition, and teachers' needs addressed in these TPD programs. The study indicated that some forms of TPD may not be deemed valuable.

On the other hand, the new era of the internet has impacted teachers' professional learning as it did with most major industries in today's world. The internet itself has been widely used as a platform for professional training producing websites, social networks, forums, and spaces for educators to enrich and engage in professional learning (Trust 2017). Recently, there has been an increase in the integration of technology in education where several nations have adopted e-learning approaches to improve the overall quality of the teaching and learning process in their educational systems. The United Arab Emirates (UAE) is no exception, with the Ministry of Education (MOE) launching several initiatives to promote the integration of technology in education, and the provision of training opportunities for teachers to enhance their digital literacy skills (Ministry of Education 2018).

Nevertheless, despite the growing availability of online professional development opportunities, there are still challenges and barriers that teachers may face when it comes to engaging with

these resources. These include factors such as access to technology and internet connectivity, teacher training and support, cultural factors, and language barriers (Lu et al. 2019; Dede et al. 2009). ESL teachers in particular, may face unique challenges when it comes to accessing and participating in online professional development, due to factors such as language barriers and a lack of culturally relevant resources (Truong & Murray 2019).

The broader literature on OTPD for language teachers suggests that teachers generally hold positive attitudes towards OTPD (Little & Housand 2011; Chu 2013; Masters et al. 2010). They recognize the benefits of online learning for English language teachers as a cost-effective approach to keeping teachers up to date with the latest developments in subject matter, teaching methods, and strategies pertaining to these subjects., accessibility, and the ability to learn at their own pace (Magidin de Kramer et al. 2012). However, concerns have been raised about the quality of online courses, lack of interaction with other teachers, lack of support and resources, lack of motivation, and lack of internet connectivity (Alghamdi 2022). Research also suggests that individual factors such as teachers' years of experience, gender, and technological background may influence their perceptions of OTPD (Desimone et al. 2016; Yu 2021; Teo 2009). For example, more experienced teachers may have more positive attitudes towards OTPD, while teachers with less experience may have more doubts (Fischer et al. 2018). Additionally, teachers with a background in technology may have more positive perceptions of online learning (Ozudogru & Ozudogru 2019).

There is limited research on ESL teachers' perception and barriers to online professional development specifically in the Arabian Gulf context and to the date of this study no one have examined OTPD perception and barriers on ESL teachers in the UAE. For example, Aldhafiri (2020) conducted a study on online professional development for EFL teachers in the Saudi Arabia and found that most instructors had a positive attitude towards online professional development. However, she identified time constraints and insufficient access to pertinent resources as hindrances. to engagement. Other studies have also highlighted the need for further research to understand the specific challenges and needs of teachers in the UAE context (Altenaiji 2005)

In light of this, the current study aims to contribute to the existing body of literature by investigating the perceptions and barriers to online professional development among ESL

teachers in the UAE, with the goal of providing insights that can inform the design and delivery of more accessible and effective professional development opportunities.

1.2 Statement of the Problem

Prestridge (2017) suggests that Online teacher professional development (OTPD) has the power to change TPD to daily practice embedded in their daily activities because teachers will not be limited to a specific time and place, unlike the traditional TPD. Although the COVID-19 pandemic had a significant impact in boosting the full adaption of (OTPD) in 2020, government schools in the UAE have been already utilizing OTPD programs in the formal training of novice and experienced teachers a couple of years before (MOE 2020). Add to that, during and post the pandemic, all types of teachers' training in public schools in the UAE transferred to the online environment. This has raised many concerns about the effectiveness of OTPD in public schools in the UAE and its power to replace traditional types of TPD.

This research study tries to examine teachers' perceptions and barriers to online teacher professional development in the UAE because, although technology is becoming more prevalent in education, there is limited information available about the experiences and perceptions of teachers in the UAE about the implementation of online teacher professional development initiatives. This lack of understanding may hinder the development and execution of effective OTPD programs in the country.

Despite the UAE government's commitment to investing in teacher professional development as a means of improving education and promoting a transition to a human resource-based economy (Ministry of Education 2018), there is a lack of understanding of the perceptions and barriers that teachers in the UAE face when it comes to accessing and participating in online professional development opportunities. Research has shown that online professional development is becoming increasingly popular, however, there is limited data about how effective it is in enhancing teachers' knowledge and skills in ESL contexts (Juárez-Díaz & Perales 2021). Therefore, understanding the perceptions and barriers to online professional development among ESL teachers in the UAE is essential for identifying potential obstacles to the effective implementation of Online professional development and for making recommendations for improving access and engagement (Badri et al. 2016). This problem is not

limited to the UAE, but it seems to be a general problem in the region (Aldhafiri 2020). Therefore, addressing this problem is important with the aim of enhancing the standards of education for English language learners and promoting teachers' professional growth.

1.3 The Rationale of the Study

Following the rise of OTPD, which has been accelerated by various factors including the COVID-19 pandemic and increased access to ICT tools, the UAE has been gradually shifting towards providing teacher professional development programs totally online. Given that OTPD has widely replaced traditional TPD, it has become crucial to examine the various factors that can generate effective OTPD, lead to improvement in teaching practice, and impact student outcomes (Desimone 2009). ESL teachers are participating in OTPD activities, but they are often mandated and obliged to attend the workshops where the programs are characterized by the ‘one size fits all’ approach. Additionally, ESL teachers in public schools in the UAE come from different backgrounds and they have different experiences and training needs. This research study will try to shed some light on these unique paradigms and may inform OTPD developers and policy makers in the education field in the UAE.

The use of technology in education is rapidly increasing, and OTPD is becoming an increasingly popular method for teachers to enhance their skills and knowledge (Means et al. 2009). English as a second language (ESL) teachers in public schools in the UAE are not an exception, and it is crucial to understand their attitudes, beliefs, and perceptions towards OTPD (Al-Bargi 2020). Moreover, exploring the influence of the teachers' years of experience, gender, and pedagogical and technological background on their perceptions of OTPD can provide valuable insights into the unique needs of these teachers (Fischer et al. 2018).

The purpose of this study is to investigate the attitudes, beliefs, and perceived barriers of ESL teachers towards OTPD in public schools in the UAE. The second research question aims to explore the influence of the teachers' years of experience, gender, and pedagogical and technological background on their perceptions of OTPD (Nuland 2019). Additionally, the study seeks to identify the perceived barriers that prevent ESL teachers from actively participating in OTPD activities (Means et al. 2009).

The results of this study can provide valuable insights for policymakers, school administrators, and teacher trainers on how to support and motivate ESL teachers to participate in OTPD (Nuland 2019). Furthermore, the findings can inform the development of effective OTPD programs that cater to the unique needs and circumstances of ESL teachers in public schools in the UAE (Means et al. 2009). Ultimately, this can lead to an improvement in teaching and learning when teachers acquire the essential skills and knowledge to deliver quality education (Desimone 2009).

1.4 Significance and relevance of the Study

This study contributes significantly to the understanding of the attitudes and perceptions of ESL teachers towards OTPD in public schools in the UAE (Chang & Chen 2016). The findings of this study can play an important role in addressing the factors that influence the participation in OTPD, such as their years of experience, gender, and pedagogical and technological background and benefits of OTPD among ESL teachers (Wilson, Ritzhaupt & Chen 2020). This information has the value of informing the development of more effective and equitable professional development programs across all government schools in the UAE, ultimately improving the quality of education provided to students in the UAE (Badri et al. 2016).

Additionally, this study focuses on highlighting the perceived barriers that prevent ESL teachers from actively participating in OTPD activities (Fang, Chan & Kalogeropoulos 2021). By identifying these barriers, policymakers, school administrators, and teacher trainers alike can take action to support and motivate teachers to participate in different OTPD opportunities, leading to better prepared and more effective educators (Alghafli & Alshammari 2018).

Furthermore, this study contributes to the growing body of research on online professional development, adding to our understanding of the attitudes and perceptions of teachers towards this mode of professional growth (Wilson, Ritzhaupt & Chen 2020). The knowledge gained in this study can be used to inform the development of online professional development programs and resources, ultimately, it contributes to improving the quality and accessibility of professional development opportunities for teachers (Fang, Chan & Kalogeropoulos 2021).

Overall, this study has the potential to provide valuable insight into the development of effective and equitable OTPD programs in public schools in the UAE, leading to a valuable contribution to the improvement of education in the country (Al-Bargi 2020).

1.5 Purpose of the study

The study aims to investigate and understand teachers' perceptions of OTPD development and identify the factors that limit or trigger teachers' effective participation in such offerings. Moreover, it aims to gain a comprehensive understanding of the differences in perception and impact between different teachers based on teachers' specific needs.

This study aims to provide insights into the challenges and opportunities facing ESL teachers in the UAE in terms of their engagement with online professional development, and to inform the design and implementation of effective OTPD programs that meet the needs of this population. The study aims to contribute to the broader literature on OTPD for language teachers, specifically in the context of the UAE, and provide practical implications for policy makers, school administrators, and teacher trainers.

Moreover, it aims to contribute significantly to the field of education by offering an in-depth analysis of the factors that influence ESL teachers' perceptions of OTPD and the barriers that hinder their active participation in such activities. The study aims to be useful and informative for educators, trainers, policymakers, and researchers in the field of education, and to serve as a foundation for future research in this area.

This study assumes that continuous professional development (CPD) for teachers is the key to improving students learning outcomes (Desimone 2009), hence it seeks to answer the questions coming right next.

1.6 The Research Questions

This study aims to answer the following research questions.

1- What are the perceptions of ESL teachers towards OTPD in public schools in the UAE?

2- To what extent is the perception of OTPD by ESL teachers in the UAE influenced by their years of experience, gender, and pedagogical and technological background?

3- What are the perceived barriers to ESL teachers' active participation in OTPD activities in public schools in the UAE?

1.7 Definition of Key Terms

- Teacher Professional Development, according to Schlager and Fusco's (2003, p. 5), is a "career-long, context-specific, continuous endeavor that is guided by standards, grounded in the teacher's work, focused on student learning and tailored to the teacher's stage of career development".
- Online Teacher Professional Development, according to Fishman et al. (2013), is any learning experience designed for teachers that is delivered, wholly or partly, through the internet (Fishman et al. 2013).
- Experienced Teacher is a schoolteacher with more than five years of teaching experience (Rodriguez & McKay 2010).
- Novice Teacher as Kindall (2018) stated, is a schoolteacher with less than five years of teaching experience.
- Technological Knowledge, according to Ozudogru and Ozudogru (2019), refers to knowledge of different software, multimedia, interactive whiteboards, PowerPoint, and advanced technologies like digital video and the internet.
- Pedagogical Knowledge, based on Shulman's (1986) definition, is the knowledge of different educational theories, instructional methods, materials, classroom management, lesson plan development, and assessment procedures that support student learning.

1.8 The structure of the Study

This dissertation is divided into five chapters. Chapter One provided an overview of the study including the background, statement of the problem, rationale, study significance and purpose, and research questions. Chapter two reviews the literature relevant to OTPD and a summary of the theoretical framework. Chapter Three explains the methodology used in this study, including

research design, instrumentation, sampling method, procedures, and ethics. Chapter four in this study provides a detailed summary of data analysis and findings. Finally, chapter 5 contains the discussion, recommendations for future research, implications for practice, and summarizes the limitations of this study.

Chapter 2 : Literature Review

2.1 Teacher Professional Development

The topic of Teacher Professional Development (TPD) and continuing education has been extensively studied by researchers, and there is a vast body of literature available on this subject (Kennedy 2016; Darling-Hammond & Richardson 2009). Throughout history, ongoing discussions have taken place regarding TPD, and researchers have provided valuable insights into this field. This voluminous literature teems with studies that have carefully examined professional development in a myriad of ways (Wei, Darling-Hammond & Adamson 2010). At the core of all the studies so far published are teachers who are voluntarily seeking new skills and learning for their professional growth in an effort to transfer the acquired knowledge and pedagogies to their classroom practices. By doing so, teachers are striving to improve their teaching practices, which has the potential of eventually impacting their students' achievement (Avalos 2011). Admittedly, literature has reached a strong consensus that teachers' professional learning has a direct impact on teachers' teaching practices. Therefore, the interest in TPD can be seen in conjunction with the consistent desire of policymakers and stakeholders to raise the quality of teaching and learning practices in schools (Bostancioglu 2018). For example, Abu Dhabi Education Council, a government organization responsible for all education initiatives in the emirate of Abu Dhabi from 2009 to 2018, highlighted the importance of TPD in developing teachers' knowledge and skills and in impacting classroom practices, so they invested heavily in TPD (ADEC 2012).

Upon the completion of any professional development program, teachers will experience some kind of change in their teaching practices, and this change can occur due to many reasons; however, such a change can't always be seen as a positive development. Jackson (1992) distinguishes between the "development" and the "change" teachers undergo during their professional careers. According to the study, the knowledge, experience, and wisdom teachers gain throughout their entire careers are "desirable" changes and hence can be labeled as "development". The study, on the contrary, describes the sense of discouragement teachers

might experience as they lose interest in teaching as “undesirable” and labeled it as “change” (Sarsar 2008).

Although there is general agreement among researchers on the definition of TPD (Guskey 2002; Schlager & Fusco 2003; Darling-Hammond 2017; Fischer et al. 2018; Dede et al. 2009), there is no such consensus on the characteristics of effective professional development. Historically, it has been difficult to agree on how effective professional development should look (Guskey 2003). However, Darling-Hammond et al. (2017) proposes a well-cited definition of effective professional development as a well-planned, coherent set of learning experiences that is ongoing, purposeful, and results-driven, and that leads to the acquisition of knowledge and skills that teachers need to help students perform higher.

In an effort to evaluate the quality of TPD, Guskey (2003) examined a series of traits of TPD published by the best educational agencies, like the Educational Testing Service (ETS) and the National Institute of Science and Education (NISE) as a means of measuring its quality. The findings revealed a lack of scientific evidence to support their choice of characteristics that make effective TPD. Although the study concluded that each one of the 13 different lists analyzed is uniquely different, it mentioned that improvement in teachers’ knowledge is a common characteristic among all the studies. Therefore, it could conceivably be hypothesized that no “one size fits all” approach to effective TPD because “[d]ifferences in communities of school administrators, teachers, and students uniquely affect professional development processes and can strongly influence the characteristics that contribute to professional development’s effectiveness” (Guskey 2003, p. 47).

2.2 Online Teacher Professional Development (OTPD)

As previously stated, online teacher professional development OTPD is defined as teacher professional development that takes place in the form of courses, workshops, or other learning modules which are delivered partially or completely using digital media (Fishman et al. 2013; Powell & Bodur 2019). It is a program that is gaining momentum within schools and educational institutions globally due to the numerous perceived benefits it has proven to bring. Such a program should be linked to the economic benefits and the collaboration opportunities induced (Lay et al. 2020). Fishman et al. (2013) posit that online learning is as good as face-to-

face learning if not better. Hodges, Lowenthal and Grant (2016) went even further and limited traditional "face-to-face" TPD to a group of teachers sitting together in the same place at the same time to learn broad topics, which rarely improves instructional practices and student outcomes.

OTPD is a complex field due to the intricate systems, contextualized nature of schools, and the complexity of teacher change (Darling-Hammond 2017). In addition, OTPD uses digital media tools that are available anytime anywhere, it's not only formal top-down programs carried out under school or district authorities, but it can be also informal like online communities on social media platforms (Lantz-Andersson et al. 2018). It also recognizes formal OTPD as a top-down professional development that is developed by a school or district with predefined content and goals. On the other hand, informal OTPD is a self-directed initiative where teachers choose to come together to discuss, share information and collaborate on a common interest. In their systematic literature review, Lantz-Andersson et al. (2018) examined both formal and informal communities of OTPD. They explained that formally imposed and informally organized OTPDs have different objectives and address different needs among teachers, but they still share many similar features. They concluded that empirical data lack evidence of collaboration merits in the field of OTPD endeavors.

The explosive growth of OTPD has garnered the attention of many researchers, and a rigorous amount of literature can be found (Brooks and Gibson 2012; Stevens et al. 2016). However, the speed at which OTPD development and practices has evolved has not been matched by a comparable level of research on the topic that has frequently lacked reasonable theoretical implications (Booth & Kellogg 2015). This gap is magnified when considering the wide range of model programs based on a vast variety of perspectives in OTPD.

Despite the gap in research, studies have linked high-quality PD to a deeper and better understanding of teachers' learning and development (Bobis et al. 2020). Learning is defined as a social process that involves interaction with others in a recognized form (Armellini & De Stefani 2016; Garrison et al. 1999; Lock 2006; Seddon et al. 2008; Williams & Burden 1999). Online professional development promotes collaboration, encourages peer reflection, enables constructive feedback, provides participants with a chance to participate in coaching, and is central to effective PD practice, where learning is happening as a natural process (Lord &

Lomika 2014). However, it is worth noting that OTPD is delivered virtually via information and communication technology media where trainees don't necessarily have to meet their peers or PD facilitators in person (Rogers 2011).

2.3 Effective design features of OTPD

Design features of OTPD are crucial to achieving the target outcomes of any OTPD. Designing OTPD begins with a clear set of goals and strategies to keep teachers engaged and provide them with space to make decisions about their learning (Taylor 2011). To do so, technology and pedagogy should be aligned when designers develop OTPD programs. It is not merely about innovative technologies, but it's rather about employing the right tools to effectively match the pedagogical aim of OTPD (Graham et al. 2013). Design features of OTPD are considered to be effective when they support learning and make an impact on learning outcomes. McChesney (2022) examined the relationship between the design and impact of OTPD in the Abu Dhabi context. The data were collected from 35 public school teachers who participated in 297 formal OTPD programs over one year. Her findings suggest a strong relationship between the design and the impact of OTPD.

The teacher's voice is a critical element of the successful design and implementation of any professional development model (Ketelhut et al. 2006). Failing to address learners' needs will lead to biases and increased rates of dropouts (Ansyari, Groot & Witte 2022). Moreover, OTPD literature still calls for a need to identify effective practices for better design and implementation. Empirical and theoretical challenges remain an obstacle against generalizing simplified design features that lead to a higher impact on teachers' performance and ultimately enhance students learning outcomes. This leaves a great deal of responsibility on designers who should carefully incorporate personalized, flexible, appropriate, and autonomous activities and integrate learners' proximal development area.

In short, the complex nature of OTPD and teacher change remains an obstacle to consensus among researchers on what design elements are more important and why "one size fits all" might lead to biases in the design process and to a failure in achieving the desired impact of OTPD despite the "successful design".

2.4 Effects of Online Professional Development on Students' attainment

Ongoing OTPD is key to improving teachers' performance and equipping in-service teachers with the skills and knowledge that will ultimately serve the development of students' achievement (Guskey & Yoon 2009; Murchie et al. 2018). Therefore, studying the influence of online professional development on students' performance is key to determining the efficacy of this modality. Several studies have examined the impact of OTPD on students' achievement. These studies have reported inconsistency in terms of results. Over the course of three years, Blanchard et al. (2016) studied the impact of OTPD on 20 teachers' performance and beliefs. The results of students' performance in science and math were analyzed and revealed significant improvement after teachers completed the OTPD program. Dash et al. (2012) studied how OTPD impacted a math teacher in grade four in terms of content, pedagogy, and student achievement. The results of the study revealed improvement in pedagogy and content knowledge with no significant impact on the learning outcomes of students.

Desimone (2009) proposed a model to explain how high-quality professional development will result in improved student outcomes. He distinguished five key elements of professional development that can facilitate positive changes in student outcomes, with emphasis on the significance of subject matter specificity, hands-on learning, consistency, length, and involvement of the group as a whole. His framework demonstrates that higher teacher quality and improved instructional practices, which are fostered through high-quality professional development, can lead to better student learning outcomes. To relate this model to the current study, we argue that teachers who participate in effective online professional development programs will develop knowledge and pedagogies that they are going to use in their daily instructions in classrooms. This will ultimately result in increased student achievement (see Figure 1).

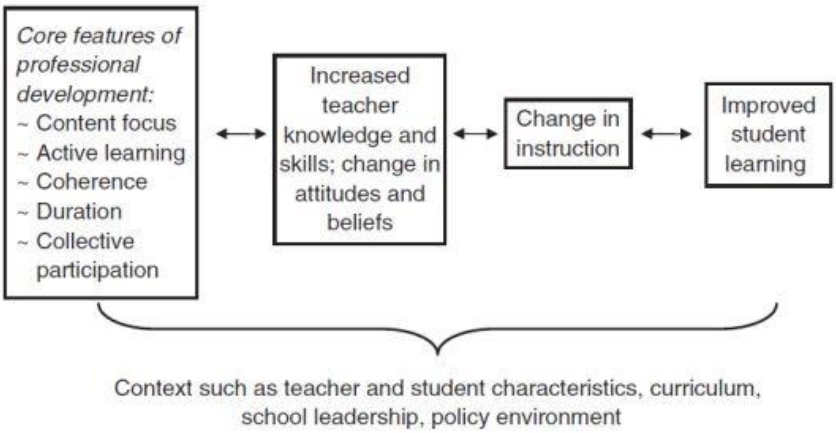

Figure 1: Proposed Framework for Studying the Effects of TPD

(Source Desimone 2009, p. 185)

Several studies revealed no significant difference between OTPD and in-person TPD when it comes to the impact on learning and student achievement. Fishman et al. (2013) explained this similarity by the similar course design whereas differences in modality are only in the media used. A more recent study comparing OTPD impact on student achievement with face-to-face TPD by Yoon, Miller and Richman (2020) reported no positive interpretations of both in-person and online TPD with roughly the same students' achievement in both models. Nonetheless, they highlighted the ease of use and the flexibility of OTPD over traditional in-person modality. Accordingly, effective TPD attributes to the sound design and learning activities while technology can only play a facilitating role (Darling-Hammond et al. 2017).

2.5 OTPD: Attitudes and Competencies

Educational reforms are often accompanied by professional development initiatives. In the UAE context, there were many educational reforms carried out to keep pace with the rapid and ambitious development of the country. Professional development is a complex multi-dimensional term that prerequisites cognitive and emotional readiness of teachers (Albers et al. 2015). Kennedy (2016) seconds that in order for the new content and pedagogies learned in TPD to be transferred to class, teachers must have solid needs and strong motivation to learn new content from PD. In the context of OTPD, teachers' attitude stands for a great deal. Teachers'

interests, expectations, and needs brought before the learning takes place might determine the success of both activity and outcome of OTPD in a formal context (Dille & Røkenes 2021). Graham and Fredenberg (2015) highlight teachers' mindset about technology as the underlying factor in teachers' attitudes toward OTPD. They might fear using technology, or they might fear losing face when participants don't see each other face-to-face. Therefore, the digital competence of teachers is a key factor to guarantee the successful activity and outcome of any OTPD. To support this claim, Godsk and Nielsen (2022) revealed in their study that teachers' perception of technology integration highly influences implementing effective OTPD.

2.6 Teachers' Perceptions of OTPD: External and Internal Factors

Much existing literature studied teachers' views of OTPD and teachers' preferences for the various types of OTPD. Many of these studies have put forward internal factors related to teachers' attitudes and fears of both technologies and making mistakes. For example, Tsiotakis and Jimoyiannis (2016) believed fear of negative feedback influences the process of OTPD. In a recent study, Sadeghi and Navaie (2021) used a survey to examine English teachers' attitudes toward participating in OPD based on the context design (activities). They found most teachers are interested in hybrid and asynchronous OTPD over synchronous programs. In their qualitative study, Barnes, Guin, and Allen (2018) used focus groups to collect early childhood teachers' preferences for an OTPD program in the USA. The results of their study revealed varied preferences due to varied experiences, different needs, gender, and diverse learning preferences.

Nuland (2019) surveyed 605 U.S. English teachers to explore how Technological Knowledge (TK), Pedagogical Knowledge (PK), and years of experience impact their perception of OTPD. The study found that while all teachers had a positive perception of OTPD, participation and perception were influenced by TK and PK, with no significant effect from years of experience. These results suggest that having a solid foundation in TK and PK may be crucial for effective participation in OTPD, regardless of experience level.

2.7 History of Professional Development in the UAE

The United Arab Emirates is an Arab country that was established in 1971 in the Arabian Peninsula. With the help of oil abundance, this relatively young nation has witnessed immense developments on every front in such a short period. Since the first modern school was founded in Sharjah in 1930 (Alhebsi et al. 2015), the country has gone through many major changes. In this context, the ambitious rapidly progressing nation went through many educational reforms to keep pace with these rapid developments (Al Murshid & Wright 2022). Educational programs were developed by policy makers to align these reforms with international standards (Hathorn & Dillon 2018). These educational reforms have resulted in a continuous pursuit of equipping teachers with up-to-date knowledge and high-quality professional development to cater for the high demand for well-trained educators. Striving to meet international standards and a world-class education system, the UAE has invested heavily in professional development programs over the past decades (Tabari 2014). Buchner, Chedda and Kindreich (2016) explained the focus on professional development plans in the UAE strategic plan (Education 2020) to the urgent need for knowledgeable, skilled, and well-trained teachers who are capable of practicing their role in leading change. Consequently, a survey conducted by TALIS (OECD 2018) indicates that teachers in the UAE are among the highest in terms of participation in professional development programs compared to other nations.

Overseeing the education system in the UAE, the ministry of education (MOE) has put emphasis on providing in-service teachers with ongoing professional development opportunities (Alawani & Singh 2013). It has established various OTPD opportunities for their in-service teachers, including the specialized centralized training week for subject teachers at the beginning of each term. This OTPD is carried out at the beginning of every term for one week and highlights the areas of curricula competence, technological literacy, and pedagogical competence. Additionally, all in-service teachers are required to successfully complete 30 hours or more of professional development training yearly as part of the yearly teacher evaluation requirements (Buchner, Chedda & Kindreich 2016, Alhassani 2012). Another initiative by the MOE is the "Learning Curve" which is a self-learning platform developed for teachers and provides fully online asynchronous courses (Al Murshid & Wright 2022). Despite these efforts, results of a

recent OECD (2020) survey show local professional development for teachers in the UAE as courses detached from the school context and often lack consistency.

Although mandating professional development can guarantee higher participation rates, it doesn't have to result in improved performance. Buchner, Chedda and Kindreich (2016) highlighted concerns and critical issues in mandatory professional development programs in the UAE. These concerns are explained below.

a) Topics covered in professional development lack inclusiveness of important topics like new technologies.
b) Mandating TPD has led to negative perceptions among some teachers which limited teachers' benefits from PD sessions.
c) Teachers favored school-based professional development over centralized training.
d) TPD is viewed as a burden when teachers are facing barriers like timetabling and overload resulting in a failure to achieve the target goals of TPD.

Sarsar (2008) examined traditional professional development in public schools in the UAE. He indicated that PD programs were most likely irrelevant to teachers' needs, associated with the negative attitudes of participating teachers, and as a result, didn't impact teaching practice and students' achievement. He suggested addressing teachers' needs with relevant PD programs by adopting a reflective approach to PD and listening to teachers' voices. Smith et al. (2020 p. 80) explained "Teachers generally report low satisfaction with most professional development experiences".

In their cross-national study of GCC countries, Wisman and Anderson (2015) claim that the use of ICT in professional development programs for science teachers in GCC countries is similar to international levels. Alawani and Singh (2017) emphasized the role of ICT in teacher professional development in the UAE by developing and pilot testing a smart learning mobile conceptual framework. The result of their pilot study revealed teachers' satisfaction with the experience.

2.8 ESL Teachers' OTPD in the Region

English as a Second Language (ESL) teachers in the United Arab Emirates (UAE) face numerous challenges when it comes to Teacher Professional Development (TPD). Although many studies have been conducted on the topic of OTPD for ESL teachers in various contexts

globally, the researcher was unable to identify a single study that has specifically addressed OTPD for ESL teachers in public schools in the UAE. Al-Mahrooqi (2015) investigated teachers' professional development in English as a foreign language (EFL) context in Oman and found that professional development activities varied among teachers and that certain factors, such as lack of resources and inadequate support, hindered the effectiveness of professional development programs. Al-Zaabi (2021) explored the current practices of OTPD for ESL/EFL teachers in Oman and found that the majority of teachers did not participate in OTPD due to lack of time, inadequate funding, and a lack of training opportunities. Aldhafiri (2020) conducted a study aimed at EFL teachers in Saudi Arabia and reported similar findings with regards to the identified barriers to OTPD. However, the study also highlighted the issue of limited access to such programs as an additional barrier and noted that EFL teachers generally had a positive perception of OTPD.

Ghanizadeh and Jahedizadeh (2013) investigated the professional development of EFL teachers in Iran and found that although teachers valued OTPD, there were various barriers to participation, including lack of time, lack of support from administrators, and inadequate funding. Lingdi (2023) examined the barriers of OTPD for English teachers in China and found that OTPD activities were often limited to lectures and workshops, and that teachers desired more opportunities for collaboration and mentorship. Pan and Block (2011) explored the language ideologies of ESL teachers and how these ideologies influenced their professional development. As Pan and Block (2011) noted, teachers' language ideologies are deeply embedded in their beliefs about language teaching and that these beliefs could both facilitate and hinder their participation in OTPD.

Garríguez, Hiasat, and Billy (2019) have examined OTPD for ESL teachers in the UAE through designing and implementing a 5-week series of OTPD program for ESL teachers. The study highlights the need of such programs that cater to ESL teachers' specific needs and interests through collaborative spaces. This, in turn, was seen as a way to create professional learning communities. The study, however, highlights some challenges related to participants technological knowledge, attitudes and behaviour, and pedagogical knowledge. In an attempt to understand the perception, needs, and barriers of TPD offerings for teachers in Abu Dhabi, Badri et al. (2016) analyzed the findings of TALIS (2013) report. The study found significant

differences based on gender and school type, with male teachers having a more positive perception of TPD than female teachers. The study also found that TPD had a more positive impact on the knowledge and skills of teachers in public schools compared to private schools. In terms of barriers to participating in TPD, female teachers reported higher perceived barriers than male teachers. These findings suggest the need for gender-sensitive and school-specific approaches to TPD offerings in Abu Dhabi.

Overlooking the historical research of ESL teachers' OTPD in the region, studies have generally highlighted the importance of improving the quality of English language teaching, but that there are various challenges to participation, including lack of funding, inadequate support, and a lack of opportunities for collaboration and mentorship. Addressing these challenges will be essential for improving OTPD programs and enhancing teacher performance and student outcomes.

2.9 The Impact of COVID-19 Pandemic on OTPD in the UAE

On March 8, 2020, the UAE government announced the closure of all educational institutions, including nurseries, schools, and universities and mandated the shift to online learning (Government's Efforts 2020). This abrupt shift to distance learning prompted more than 25,000 teachers and administrative staff from government schools, along with over 9,200 educators from private schools, to undergo online training to prepare for the transition to a virtual environment (Government.ae 2021). The move to online learning was a significant change for the education sector in the UAE, which had traditionally relied on face-to-face teaching. Nevertheless, the country's educators rose to the challenge and adapted to the new paradigm, enabling the continuation of education during a challenging time. As the world began to recover from the pandemic and control the spread of the disease, schools gradually resumed traditional face-to-face teaching.

Meanwhile, the majority of local educational institutions in the UAE continued to employ OTPD as a formal TPD model, recognizing its advantages. Firstly, OTPD has demonstrated lower costs compared to traditional TPD models, making it a viable option for large-scale TPD initiatives (Darling-Hammond et al. 2017). Secondly, using new technologies in TPD and OTPD has expanded opportunities for teachers to communicate, collaborate, negotiate, and reflect online while connecting with other educators and TPD facilitators. Thirdly, OTPD enhances not

only teachers' learning but also provides administrators and OTPD organizers with better means to monitor, evaluate, and adapt professional development programs. Lastly, OTPD ensures that all teachers, regardless of their location or available resources, have access to high-quality professional development opportunities (Stevens et al. 2016). Moreover, the COVID-19 pandemic has led to an increase in online platforms and their diversity, which has helped both students and teachers improve their 21st-century skills (Saavedra & Opfer 2012).

2.10 Theoretical Framework

Initially, the researcher considered using communities of practice theory to frame this study. However, after careful examination, the researcher has decided to use the following theories to frame the current study:

2.10.1 Personal and Social constructivism

One of the most embraced theories in education recently is constructivism. The reason behind this is the assumption that knowledge doesn't exist independently. Constructivists believe that thoughts and knowledge are constructed based on previous acquaintances, feelings, and definitions, along with an active relationship with the physical and social environment (Fosnot and Perry 2005). Many scholars and educators are associated with constructivism (Von Glasersfeld 1989; Vygotsky 1978).

Cobb (1994) explains two dominant schools of constructivism, namely, personal and social constructivism. The main difference between the two approaches is related to where knowledge is constructed. For personal constructivism, knowledge is constructed within the head of the learner while trying to reorganize their experiences and cognitive structure (Piaget 1970). On the other hand, sociocultural constructivism assumes that knowledge is built through communities of practice and by social interactions (Vygotsky 1978). This study embraces the belief that Knowledge is believed to be built through both personal and social interactions. The two approaches complete one another and can't be separated.

2.10.2 Adult Learning Theory

Knowles (1980) states that adults learn in a way that is different from how children learn. According to him, prior knowledge adults possess makes them unique in how they learn. Adult learning theory states that learners learn best when their needs are addressed and learning is a life-long process (Eleonora 2003; Hiebert, Gallimore & Stigler 2002). Knowles has six assumptions in adult learning theory; these are:

1. Adult learners should be aware of what they are going to learn, how they are going to learn it, and why it is important to learn before learning takes place.
2. Adults should be responsible for their own learning, and any decisions about learning should be made by the adults themselves.
3. Prior knowledge has a significant role in learning. Adult experiences are different which impact their learning needs.
4. Real-life situations form a strong reason for learners to engage in a learning experience that will help them cope with these situations.
5. Adults prefer life-centered and problem-centered approaches toward learning rather than subject-centered ones.
6. Adults prefer to Learn knowledge and skills that help solve important problems in their lives.

According to adult learning theory, professional development defines teachers as learners who require a great deal of attention to their needs and prior knowledge. Therefore, the study is framed with the belief that One-size-fits-all is an ineffective model for implementing OTPD.

Chapter 3 : Methodology

3.1 Introduction

The methodology section is an essential component of research as it enables the gathering and analysis of the necessary information to address the research question. This chapter is crucial for establishing the credibility and reliability of the research findings as it offers a detailed account of how the data were collected, analyzed, and interpreted. By providing insight into the research process, it enhances the transparency and replicability of the study. The purpose of this chapter is to provide a clear and comprehensive explanation of the research design, data collection techniques, and data analysis methods, which allows readers to understand the steps taken to address the research questions. This chapter also outlines the statistical methods used to analyze the data and draw conclusions from the findings. Finally, the chapter concludes by discussing the limitations of the study highlighting the ethical considerations taken into account during the study, such as informed consent and privacy concerns.

3.2 Research Questions

This study aims to answer the following research questions.

1- What are the perceptions of ESL teachers towards OTPD in public schools in the UAE?

2- To what extent is the perception of OTPD by ESL teachers in the UAE influenced by their years of experience, gender, and pedagogical and technological background?

3- What are the perceived barriers to ESL teachers' active participation in OTPD activities in public schools in the UAE?

3.3 Research Design

To answer the research previously mentioned research questions, the study employed a non-experimental descriptive cross-sectional survey research design to retrieve participants' perceptions of OTPD and ESL teachers' perceived barriers that could limit their active participation in OTPD activities. The use of the cross-sectional methodology in the study was

intended to measure the current ESL teachers' perceptions and barriers of OTPD as well as to highlight any differences in perceptions and barriers between novice and experienced teachers and any gender differences. The researcher has chosen the survey methodology because it was the best fit to answer the research questions. Firstly, surveys enable the researcher to identify the characteristics and features of target participants (Berends 2006). Secondly, it helps the researcher identify trends, grasp opinions, and understand perceptions (Creswell 2008). The three types of data explained by Rea and Parker (1992), which are description, behavior, and preference, are utilized in this study. Ary, Jacobs, and Razavieh (1990) propose five components for a survey. They argued that a survey starts with a) specifying the research objectives, b) defining the population and sample, c) designing the survey instrument, e) carrying out the primary survey, and finally, g) analyzing the results.

3.4 Population and Participants

The population of the study is teachers of English in government schools in the UAE. A total number of 300 teachers responded to the online survey and are considered to be the participants of the study. An analysis of their demographic characteristics; gender, age, education level…etc. is conducted for further investigation of the findings of the research.

3.5 Sampling Method

Newsted, Huff and Munro (1998) stated that the whole population can be represented when the sample chosen for the study is a random sample. Therefore, in order to make sure the sample chosen can be generalized to the whole population, a random sampling method was used. The researcher will collect a random sample of 15% of the population. The researcher planned to use the geographical distribution of the population in the seven emirates in the UAE to determine the percentage of participation from each emirate and to ensure equal participation. This meant that when the number of responses from one emirate exceeds the allocated percentage, the responses are assigned numbers and participants were selected using an odd-number selection process to minimize the possibility of geographical bias (Dillman, Smyth & Christian 2014)

However, due to the few responses compared to the total number of the population, all available participants were selected based on their willingness to participate in the study and based on their approval of participation after signing the consent form that was embedded in the survey.

3.6 Instrument

After obtaining all formal approvals from the ethics committee at the British University in Dubai and Emirates School Establishment, (see Appendix B, C), the survey was distributed via email to all current ESL teachers in government schools in the UAE. The survey instrument contained 4 main parts and can be found in Appendix A. The sections in the survey can be summarized as:

Section 1 was a demographic survey with four paragraphs to describe several contextual variables of the teaching and personal characteristics of the participants (i.e., work experience, age, gender). These items are considered important because they provide insights about the participating sample as well as in compiling data to answer research question 2. Since the study is grounded in adult learning theory and constructivism, it was initiated with the assumption that teachers' prior knowledge and backgrounds interfere with their professional development experience (Yilmaz 2008). Hence, the information gathered in section 1 of the survey is of great importance to draw conclusions for the study.

Section 2 included two scales to describe the technological and pedagogical knowledge of the participants. According to Borko (2004), the characteristics of teachers participating in TPD have a direct impact on their experiences. Thus, the second section was found important to include in the survey. Items in the pedagogical and technological knowledge constructs were pulled from Graham et al. (2011) research study about technological and pedagogical knowledge among science teachers after deleting items related to science teachers.

Section 3 was an adapted version of Parsons et al. (2019) survey instrument. It included four constructs to measure a) the previous experiences teachers had with OTPD initiatives, b) their motivation to participate in OTPD, b) the perceived usefulness of OTPD, and c) the likelihood of participating in various OTPD endeavors in the future.

Section 4 was created to answer research question 3 about the perceived barriers of OTPD from a participating teacher's lens. It included a Likert scale of 10 paragraphs for teachers to choose from strongly disagree to strongly agree. Items in the scale were drawn from the literature reviewed and from the cognitive interviews that the researcher conducted with 4 volunteer participants who were excluded from participation in the study. Additionally, participants were given the option in the final instrument to add extra items if they see necessary.

3.7 Pilot Study

A pilot study was conducted before sending the link to the final survey. Seven participants responded to the survey and sent their feedback to the researcher. This was done to ensure that there is no misunderstanding or ambiguity in the items of the survey. The participants' feedback was utilized to modify the survey in order to guarantee the clarity of all items and to obtain helpful answers before it could be distributed to a larger group of participants in the main research study.

3.8 Validity and reliability of the instrument

Concerning reliability, the collected results of the survey showed a high degree of reliability, with Cronbach Alpha coefficients of 0.87. As for validity, based on the fact that the current survey instrument is adapted from previously validated instruments (Graham et al. 2011; Parsons et al. 2019), it has been already validated. Moreover, cognitive interviews were carried out with a convenient sample of 4 teachers to assess face validity and to make sure all items were interpreted and answered as intended by the researcher (cognitive validity). The teachers who participated in the cognitive interviews were all current ESL Cycle 2 and 3 teachers who had currently participated in OTPD programs. They were asked to read, answer, and reflect on the questions in the survey instrument. One item about the qualification of OTPD was edited in the fourth section of the survey after all participants agreed that many facilitators in OTPD might be qualified yet not supportive. Hence, in the final survey the phrase "not supportive" was added to make the statement more inclusive of all features of OTPD facilitators. None of the other items were found controversial.

3.9 Data Collection Procedures

Data collection procedures for this study started with obtaining the required approvals from Ethics Committee at the British University in Dubai (BUiD) and Emirates School Establishment (ESE). Taking the wide geographical distribution of participants into consideration ESL teachers in public schools in the UAE), collecting the data electronically through the Microsoft Forms program was found to be the best available option for the researcher. After granting Emirates School establishment approval through formal communication with the designated department and as per the current procedures of ESE, an email was sent to all ESL teachers from "School Operations" under the title "Facilitate Researcher's Study" with an electronic link to the survey.

3.10 Data Analysis

Upon completion of data collection using the online survey, the data was thoroughly checked to eliminate errors, inconsistencies, and double coding. Each variable's minimum and maximum values, the number and presence of missing data and outliers were examined. The data was then coded in a code book and assigned a number for each variable before being analyzed. As data analysis is a critical aspect of the quantitative method, the researcher reviewed previous studies that used similar instruments and consulted with a statistics expert to select the appropriate analysis statistics to ensure accurate and appropriate interpretation of the data. To guarantee accuracy.

3.11 Ethics

This research study does not involve any ethical considerations that may hinder its proper application given that all participants are high school teachers who were guaranteed confidentiality and anonymity of their personal information. Besides, participants were informed about the purpose of the study and the possibility to withdraw from participating at any stage. Consent forms were embedded in the electronic survey instrument in a way that

teachers will not be able to actually participate in the survey until they read and sign the consent form (See Appendix A).

The study does not require the personal data of the participants to be shown as their names or the names of the schools they belong to will not be shown during the research. In addition, the researcher pledged in the introduction to the survey to maintain the confidentiality of the data and to use it only for research and study purposes. Besides, the fact that responses will be accessed online through a link sent to all participants, access to the data will be limited to the researcher only who has developed and owns the link.

The researcher is not expecting any potential negative effects on any of the participants in this study. Firstly, the average time to complete the survey is about 10-15 minutes only. Secondly, participation is done through an electronic link that can be completed at any time convenient to the participants. Additionally, withdrawal from participation is possible at any stage without any harm to the participants. Although not all participants are native English speakers, they are all ESL teachers whose English proficiency levels enable them to answer the questions in the English language without any potential harm or need to translate the survey to any other language.

3.12 Summary of the Chapter

This chapter outlines the methodology employed to carry out the research study, which aimed to assess teachers' perceptions of OTPD development and identify the factors that limit teachers' effective participation. It details the study's participants, population, and sampling. Additionally, it lists the three research questions and specifies the procedures to answer the questions, as well as the selected instrument to collect data and the statistics for analysis.

To ensure the instruments' validity and reliability, a pilot study was conducted to investigate the reliability and validity of the survey. The chapter concludes with a detailed discussion of ethical and legal issues that were addressed honestly. The next chapter will present the results and findings of the study based on the methodology outlined in this chapter.

Chapter 4 : Data Analysis and Results

4.1 Introduction

This chapter presents the findings of the study, which aimed to investigate and clarify the perceptions of English as a Second Language (ESL) teachers in the UAE regarding online teacher professional development, their differences based on specific variables (years of experience, gender, pedagogical and technological knowledge), and the perceived barriers. The Statistical Package for Social Sciences program (SPSS 26) was used to conduct the statistical analysis of the data collected from the survey instrument that was distributed to the study sample of 300 ESL teachers in public schools in the UAE to answer the research questions posed in chapter 1.

Moreover, a detailed quantitative data analysis was performed in this chapter to answer the research questions presented in Chapter 1. The analysis involved both descriptive statistics and inferential statistics. Descriptive statistics were used to describe the mean score, standard deviation, frequency, and percentage of the perceptions of OTPD by ESL teachers and its perceived barriers represented in research Question 1 and research Question 3 respectively. Inferential statistics were performed to answer Question 2, which involved a stepwise multiple regression analysis.

5-points Likert scale was adopted when asking the participants to measure their answers to be treated statistically as follows:

Table 1: Likert scale

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
5	4	3	2	1

The following scale was used to analyze the data and to indicate and determined the extent of teachers' agreement with each item (Sekaran, 2003):

= (The highest value-The minimum value) ÷ number of level = (5-1) ÷ 4 = 1

The following table shows the extent of teachers' agreement with each item divided to four levels:

Table 2: Extent of Agreement Scale

No.	Range	Extent of agreement
1	1.00 – 2.00	Strong disagreement
2	2.01 – 3.00	Disagreement
3	3.01 – 4.00	Agreement
4	4.01 – 5.00	Strong Agreement

According to this table, the ranges of the perception of ESL teachers towards OTPD in public schools in the UAE and the perceived barriers were (1.00 – 2.00) for Strong disagreement, (2.01 – 3.00) for Disagreement, (3.01 – 4.00) for Agreement and (4.01 – 5.00) for Strong Agreement.

4.2 Personal Characteristics of the ESL teachers

Personal characteristics of the ESL teachers are shown in Table 3. According to this Table, 51.7% of the total teachers were male and 48.3% were female. The age group of ≤ 30 years comprised 8% of the teachers, while 30% were between the ages of 31 and 39, 35.3% were between the ages of 40 and 49, and 26.7% were aged ≥ 50 years old. The majority of the teachers currently taught grades 9-12 (69%), while 22% taught grades 5-8 and only 9% taught grades KG1-4. Regarding educational level, 37.7% held a BA or BS degree, 42% held an MA/MEd/MS degree, 10.7% held multiple MA/MEd/MS degrees, and 4.9% held a PhD or Ed.D. degree.

Table 3: Personal Characteristics of the ESL teachers (N=300)

Characteristics		Frequency	Percentage
Gender	Male	155	51.7%
	Female	145	48.3%
Age	≤ 30	24	8.0%
	31-39	90	30.0%
	40-49	106	35.3%
	≥ 50	80	26.7%
Grade level they currently teach	KG1- 4	27	9.0%
	5-8	66	22.0%
	9-12	207	69.0%
Highest degree they hold	BA or BS	113	37.7%
	MA/ MEd / MS	126	42.0%
	Multiple MA / MEd / MS	32	10.7%
	PhD or EdD	14	4.7%
	Others	15	4.9%

4.3 RQ 1: What is the perception of ESL teachers towards OTPD in public schools in the UAE?

4.3.1 OTPD Topic

The topics of professional development are presented in Table 4. More than 70% of the teachers mentioned that the understanding of their subject fields and knowledge of the curriculum were among the topics of professional development. Approximately 50% of the teachers and more mentioned that the pedagogical competencies in teaching their subject fields, student assessment

practices, ICT skills for teaching, school management and administration and teaching in a multicultural setting were among the topics of the professional development.

Table 4: Topics of the Professional Development

No.	Topic	Frequency	Percentage
1	Knowledge and understanding of my subject field(s)	214	71.3%
2	Pedagogical competencies in teaching my subject field(s)	193	64.3%
3	Knowledge of the curriculum	218	72.7%
4	Student assessment practices	175	58.3%
5	ICT (information and communication technology) skills for teaching	166	55.3%
6	Student behavior and classroom management	98	32.7%
7	School management and administration	153	51.0%
8	Approaches to individualized learning	140	46.7%
9	Teaching students with special needs	112	37.3%
10	Teaching in a multicultural or multilingual setting	168	56.0%
11	Teaching cross-curricular skills (e.g., creativity, critical thinking, problem-solving)	125	41.0%
12	Analysis and use of student assessments	125	41.0%

4.3.2 OTPD Delivery Method

The delivery methods of professional development are presented in Table 5. The vast majority of the teachers (90%) mentioned that the course management system such as Microsoft Teams was the most used professional development delivery method. Less than 50% of the teachers mentioned that the video conferencing was the least used professional development delivery method.

Table 5: Professional Development Delivery Method

No.	Method	Frequency	Percentage
1	Course management system such as Microsoft Teams	270	90.0%
2	Video conferencing	148	49.3%
3	Self-paced learning online module	180	60.0%
4	Learning Curve\Coursera\Linked in PD... etc.)	173	57.7%

4.3.3 Reasons for Teachers to Participate in Online TPD format.

The reasons for the participation in the online professional development format are shown in Table 6. Around 71% of the teachers mentioned that they were motivated to participate in professional development in an online format rather than face-to-face format because it was mandatory. Around 63.7% mentioned it was less expensive, 52% because it was more convenient and 46.3% because there was no option to participate face-to-face.

Table 6: Primary Reason to Participate in the Professional Development in an Online Format

No.	Reason	Frequency	Percentage
1	It was mandatory that I participate online	213	71.0%
2	It was more convenient to participate online	156	52.0%
3	There was no option to participate face-to-face	139	46.3%
4	It was less expensive to participate online	191	63.7%

4.3.4 Usefulness of Online PD

According to the opinions of 38% of the teachers, their online professional development experiences were largely beneficial, 30.7% were moderately beneficial, 18% were extremely beneficial, 10.7% were slightly beneficial, and only 2.7% were not at all beneficial (See Table 7).

Table 7: Usefulness of Online PD

No.	Usefulness of Online PD	Frequency	Percentage
1	Not at all beneficial	8	2.7%
2	Slightly beneficial	32	10.7%
3	Moderately beneficial	92	30.7%
4	Largely beneficial	114	38.0%
5	Extremely beneficial	54	18.0%

4.3.5 Perception of ESL Teachers Towards OTPD

Table 8 presents the perception of ESL teachers in public schools in the UAE towards OTPD, including the mean, standard deviation, percentage, and extent of agreement. The table indicates that the overall mean perception towards OTPD is 3.86 (SD = 0.77), and the extent of agreement is "agreement". The percentage of teachers who agree with the perception of OTPD ranges from 64.7% (n=194) for item 4 (providing real-time solutions to classroom problems) with a mean of 3.72 (SD = 1.01) and an extent of agreement, to a maximum of 82.3% (n=247) for item 2 (access to materials anytime) with a mean of 4.09 (SD = 0.85) and a strong extent of agreement.

According to Table 8, the percentage of teachers who disagree with the perception of OTPD ranges from a minimum of 4.3% (n=16) for item 2 (access to materials anytime) to a maximum of 12% (n=36) for item 4 (providing real-time solutions to classroom problems). These results suggest that ESL teachers in public schools in the UAE generally have a high level of perception towards OTPD, with a particularly strong level of perception towards the accessibility of

materials anytime and the ability to connect with people beyond their immediate geographic area.

Table 8: Perception of ESL Teachers Towards OTPD in Public Schools in the UAE

Item No.	Item	Agree		Neutral		Disagree		Mean	SD	Extent of *Perception*
		F	%	F	%	F	%			
1	I could go at my own pace.	240	80	44	14.7	16	5.3	3.99	0.88	Agreement
2	I could access the materials anytime.	247	82.3	40	13.3	13	4.3	4.09	0.85	Strong agreement
3	I was able to connect with people outside of my immediate geographic area.	227	75.7	53	17.1	20	6.7	4.02	0.92	Strong agreement
4	It provided real-time solutions to my problems in the classroom.	194	64.7	70	23.3	36	12	3.72	1.01	Agreement
5	It gave me access to resources not available in my local area.	214	71.3	51	17	35	11.7	3.8	0.96	Agreement
6	It provided ongoing support for my needs in classroom practices.	213	71	52	17.3	35	11.7	3.75	0.96	Agreement
7	It provided me the opportunity to reflect on my teaching and discuss it with other educators.	222	74	50	16.7	28	9.3	3.86	0.93	Agreement
8	I was able to apply what I learned from my PD	195	65	84	28	21	7	3.72	0.91	Agreement
9	I am happy I participated in the PD.	228	76	46	15.3	26	8.7	3.89	0.94	Agreement
10	The PD was a good use of my time.	203	67.7	62	20.7	35	11.7	3.76	1.05	Agreement
11	The content of the PD was relevant to my classroom instruction.	208	69.3	57	19	35	11.7	3.77	1.03	Agreement
Perception								3.86	0.77	Agreement

4.4 RQ 2: To what extent is the perception of OTPD by ESL teachers in the UAE influenced by their years of experience, gender, and pedagogical and technological background?

To investigate the extent to which the perception of OTPD by ESL teachers in the UAE is affected by their years of experience, gender, and pedagogical and technological background, this study employed a stepwise multilinear regression analysis. Statistically significant results were those with p-values ≤ 0.05.

The descriptive statistics in this study included the mean score and standard deviation of the perception of OTPD by ESL teachers in the UAE, their years of experience, and pedagogical and technological background, as well as the frequency and percentage of their gender.

The model summary table provided values for R, R-square (R^2), which is also known as the coefficient of determination, and adjusted R-square. Additionally, the standard error of the estimate was included. The R value was used to explain the relationship between the variables, while R-square represented the proportion of total variation in the dependent variable explained by the regression model. A higher R-square indicated a better fit for the data. The standard error of the estimate was used to verify the accuracy of the regression model's predictions.

Moreover, an ANOVA table was utilized to test whether the overall regression model fit the data well. A beta coefficients table was also presented to determine the significance and impact of ESL teachers' experience years, gender, and pedagogical and technological background on their perception. Unstandardized coefficients (B values) were calculated to indicate how each independent variable influenced the dependent variable. Positive values indicated a favorable effect on the dependent variable.

The regression analysis for the effect of ESL teachers' experience years, gender, and pedagogical and technological background on their perception was conducted at a significant level ($\alpha = 0.05$). The mean scores of perceptions, years of experience, and pedagogical and technological background were reported in Table 9. The values were 42.37 with (SD=8.51), 16.87 with (SD=8.72), 30.86 with (SD=4.08), and 21.23 with (SD=3.13), respectively. Additionally, male teachers comprised 51.7% (n=155) of the total teachers, while female teachers were 48.3% (n=145) of the total.

Table 9: Descriptive Statistics of the Study Variables

Variables	Mean	SD
Perception	42.37	8.51
Experience	16.87	8.72
Pedagogical Background	30.86	4.08
Technological Background	21.23	3.13
	Frequency	Percent
Gender		
Male	155	51.7%
Female	145	48.3%

As seen in Table 10, the R^2 value for Model 1 is 0.142, which indicates that 14.2% (R=0.377) of the changes in the dependent variable (teachers' perceptions of OTPD) can be explained by changes in the independent variable (pedagogical background). The R^2 value for Model 2 is 0.187 (R=0.432), indicating that 18.7% of the changes in the dependent variable are due to changes in the combination of two independent variables (pedagogical background and experience). Comparing both models, Model 2 is a better fit for the data than Model 1. This is because a higher R^2 value and adjusted R^2 value indicate a better fit for the model (Model 1=0.139; Model 2=0.181).

Table 10: Model summary for the extent of influenced teachers' perceptions of OTPD by their experience, gender, and pedagogical and technological background

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.377[a]	0.142	0.139	7.896
2	0.432[b]	0.187	0.181	7.699

a. Predictors: (Constant), Pedagogical Background

b. Predictors: (Constant), Pedagogical Background, Experience

Table 11 is used to determine the effectiveness of the model by assessing if the independent variables are effective in predicting the dependent variable. From Table (2.2.2.3) it can be seen that the p-values (F = 54.0 for model 1 and F = 49.2 for model 2) are 0.00 which are less than 0.05, ($p < 0.05$) for both models, this implies that the two models are good fit for the data and its effective in predicting the effect of independent variables on teachers' perceptions, but according to Table 10, Model 2 is a better model fits to the data than Model 1.

Table 11: ANOVA Analysis for The Extent of Influenced Teachers' Perceptions of OTPD by Their Experience, Gender, and Pedagogical and Technological Background

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1402.222	3	467.407	54.004	0.00[a]
	Residual	787.610	118	8.655		
	Total	2189.832	121			
2	Regression	3070.117	1	3070.117	49.247	.000[b]
	Residual	18577.550	298	62.341		
	Total	21647.667	299			

Dependent (Predicted) Variable: perception.

b. Predictors: (Constant), Pedagogical Background.

c. Predictors: (Constant), Pedagogical Background, Experience.

Table 11 provides the results of a stepwise regression analysis that allows us to determine the significance and impact of independent variables on dependent variables. The analysis involves two steps for selecting the predictor variables. In the first step, only Pedagogical Background enters the model (B= 0.785, t= 7.02, sig =0.00). In the second step, both Pedagogical Background (B= 0.856, t= 7.75, sig =0.00) and Experience (B= -0.209, t= -4.05, sig =0.00) enter the model.

Using the unstandardized coefficients from Table 12, we can obtain the Multiple Linear Regression (MLR) equation for Model 2, which is a better fit to the data than Model 1. This equation explains the extent to which teachers' perceptions of OTPD are influenced only by their experience and pedagogical background. According to the results in Table 12, the regression equation can be presented for Model 2 as the following:

Teachers' perceptions of OTPD = 19.484 + 0.856 * Pedagogical background - 0.209 * Experience

This means that pedagogical background has a significant positive impact on teachers' perceptions, with a beta value of 0.856, while experience has a significant negative impact on teachers' perceptions, with a beta value of -0.209. Gender and technological background were found to have no significant impact on teachers' perceptions.

Table 12: Coefficients for the extent of influenced teachers' perceptions of OTPD by their experience, gender, and pedagogical and technological background.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Tolerance	VIF
1	(Constant)	18.132	3.483		5.21	0.00				
	Pedagogical Background	0.785	0.112	0.38	7.02	0.00	0.38	0.38	1	1
2	(Constant)	19.484	3.413		5.71	0.00				
	Pedagogical Background	0.856	0.111	0.41	7.75	0.00	0.38	0.41	0.98	1.03
	Experience	-0.209	0.052	-0.22	-4.05	0.00	-0.15	-0.23	0.98	1.03

In summary, based on the results of this study, two models were built (Model 1 and Model 2). By comparing the two models, Model 2 was found to be a better fit for the data than Model 1. This is because the values of R^2 and adjusted R^2 in Model 2 (R^2=0.187, adjusted R^2=0.181) are higher than in Model 1 (R2=0.142, adjusted R2=0.139). The stepwise regression results showed that only two variables were selected, namely pedagogical background and experience. This indicates that the perception of OTPD by ESL teachers in the UAE is influenced by their years of experience and pedagogical background.

4.5 RQ 3: What are the perceived barriers to ESL teachers' active participation in OTPD activities in public schools in the UAE?

Table 13 presents the perceived barriers to ESL teachers' active participation in OTPD activities in public schools in the UAE, with mean, standard deviation (SD), percentage, and extent of agreement. The table shows that the mean of the overall perceived barriers is 2.93 (SD = 0.83), indicating "disagreement" with perceived barriers.

Regarding the items, according to Table 13, the percentage of teachers who agree with perceived barriers ranges from a minimum of 20.7% (n=62) for item 3 (I don't have enough technological knowledge) with a mean of 2.16 (SD = 1.17), indicating "disagreement" with perceived barriers, to a maximum of 55.3% (n=166) for item 10 (Topics offered in OTPD are repeated) with a mean of 3.41 (SD = 1.13), indicating "agreement" with perceived barriers.

Additionally, according to Table 13, the percentage of teachers who disagree with perceived barriers ranges from a minimum of 24% (n=72) for item 10 (Topics offered in OTPD are repeated) to a maximum of 69.3% (n=208) for item 3 (I don't have enough technological knowledge).

These results indicate that the main perceived barrier to ESL teachers' active participation in OTPD activities in public schools in the UAE is the repetition of topics offered in OTPD. Moreover, the majority of teachers believe that they have enough technological knowledge and, thus, this is not a significant perceived barrier.

Table 13: Perceived Barriers to ESL Teachers' Active Participation in OTPD Activities in Public Schools in the UAE

Item No.	Item	Agree		Neutral		Disagree		Mean	SD	Extent of agreement
		F	%	F	%	F	%			
1	OTPD program is not relevant to my professional needs	77	25.7	88	29.3	135	45	2.81	1.08	Disagreement
2	There is a lack of employer support.	136	45.3	89	29.7	75	25	3.26	1.05	Agreement
3	I don't have enough technological knowledge	62	20.7	30	10	208	69.3	2.16	1.17	Disagreement
4	OTPD conflicts with my work schedule.	126	42	81	27	93	31	3.17	1.12	Agreement
5	I do not have time because of family responsibilities.	115	38.3	55	18.3	130	43.3	2.93	1.18	Disagreement
6	OTPD program duration is not suitable.	89	29.7	113	37.7	98	32.7	2.99	1.06	Disagreement
7	The program offered does not support collaboration and feedback.	77	25.7	71	23.7	152	50.7	2.74	1.07	Disagreement
8	OTPD facilitators are underqualified	68	22.7	77	25.7	155	51.7	2.67	1.09	Disagreement
9	There are no incentives for participating in OTPD.	140	46.7	74	24.7	86	28.7	3.2	1.19	Agreement
10	Topics offered in OTPD are repeated.	166	55.3	62	20.7	72	24	3.41	1.13	Agreement
	Perceived barriers							2.93	0.83	Disagreement

In conclusion, the extent of agreement of the perceptions of English as a Second Language (ESL) teachers in the UAE regarding online teacher professional development was "agreement", which is indicating a relatively high perception by teachers.

Additionally, the perception of OTPD by ESL teachers in the UAE is influenced only by their years of experience with negative impact and pedagogical background with positive impact, while their perception isn't influenced by their gender and technological background.

Finally, the extent of agreement of the perceived barriers to ESL teachers' active participation in OTPD activities in public schools in the UAE was "disagreement", which indicates a relatively low perceived barriers perception by teachers.

Chapter 5 : Discussion

5.1 Introduction

The fact that there has been an increase in the adoption of online teacher professional development (OTPD) in the past decade is due to the availability of various formats for teacher professional development (TPD) in web-based technologies (Henke 2007; Parsons et al. 2019). The increased accessibility and functionality of web-based technologies have created new opportunities and modes for the delivery of TPD (Appana, 2008; Chen & Macredie 2004; Dede et al. 2009; Parsons et al. 2019; Prestridge 2017; Simonson et al. 2011). Historically, time, money, and geography have been identified as barriers to ensuring teachers have access to high-quality TPD (Powell & Bodur 2019). Thus, the ubiquity of online, self-directed TPD opportunities has created an era in which teachers are now demanding a "move beyond a 'one size fits all' model" to accommodate different learning needs, interests, and school contexts (Powell & Bodur 2019; Prestridge 2017). According to Parsons et al. (2019), approximately three out of four teachers participate in some form of OTPD, demonstrating a high demand for OTPD experiences. However, the research on its impact and effectiveness is still emerging (Fisher et al. 2018; Mahmoudi & Ozkan, 2015; Parsons et al. 2019).

The study focuses on examining the use of OTPD and perceptions of usefulness and impact, which is an extension of existing OTPD literature. Fisher et al. (1999) and Dede et al. (2006) have shown that teachers tend to have positive reactions to and preferences for OTPD, and some studies have demonstrated that OTPD has a positive impact on teaching practice. However, these studies have not examined the teacher characteristics that influence the impact of OTPD on teaching and student learning. The study is grounded in understanding teacher learning and development on a continuum from teacher preparation through induction and later stages of development (Desimone et al. 2016; Feiman-Nemser 2001; Lee et al. 2007). As teaching is a complex cognitive skill, teachers' knowledge development for students, content, and pedagogy changes in predictable ways over time (Borko & Shavelson 1990; Carter et al. 1987; Fischer et al. 2018; Lankford 2010). Although there is a large body of research that demonstrates the perceptions and barriers of teachers towards OTPD, there is limited research that examines ESL

teachers' perception and barriers in public schools in the UAE and the individual factors that may affect their experiences. The purpose of this study was to explore the perceptions and barriers of English as a Second Language (ESL) teachers in public schools in the United Arab Emirates (UAE) towards online teacher professional development (OTPD), and to investigate the extent to which their perceptions are influenced by the years of experience, gender, and pedagogical and technological background. To accomplish these goals, a survey was administered to a sample of 300 ESL teachers in public schools in the UAE, and data were analyzed using descriptive statistics and stepwise multiple regression analysis.

In the following sections, the findings of the survey regarding ESL teachers' perceptions of OTPD, including the extent of agreement on various items related to accessibility, real-time solutions, and connecting with others outside of their immediate geographic area will be discussed. Furthermore, the results of the stepwise multiple regression analysis, which sought to determine the extent to which ESL teachers' years of experience, gender, and pedagogical and technological background are related to their perceptions of OTPD will be examined. We will present and discuss the beta coefficients for each of these factors and consider their significance and effect on teachers' perceptions.

Overall, this study provides valuable insights into the perceptions of ESL teachers in the UAE towards OTPD and highlights the importance of considering factors such as years of experience, gender, and pedagogical and technological background when designing and implementing OTPD programs.

5.2 Perception of ESL Teachers Towards OTPD in Public Schools in the UAE

Current research suggests that online teacher professional development (OTPD) offers several advantages over face-to-face delivery of TPD. These advantages include increased control over learning, accommodation of different learning needs, and convenience and asynchronous access (Chen & Macredie 2004; Ericso et al. 2016; Fitzgerald & Semrau 1996; Morse 2003). In addition, OTPD has the potential to increase access to high-quality teaching resources and curriculum materials, which could help address equity gaps in curriculum resource allocation

across different school districts (Cavanaugh & Dawson 2010; Dede et al. 2009; Kleiman 2004; Walker et al. 2008).

This study builds on the existing literature by demonstrating that teachers have positive perceptions of OTPD. For example, over 75% of respondents indicated that their OTPD experience allowed them to connect with people outside their geographic area, and a majority of 82% reported that they were able to access the materials anytime, supporting the recommendation that high-quality TPD should be sustained (Desimone 2009). However, the study also found that OTPD resources often lack alignment with ESL curricula in public schools and are not differentiated to address individual teachers' needs, suggesting the need for improvement in OTPD content and activities (MacDonald & Douglas, 2015). Overall, the study highlights both the benefits and challenges of OTPD in impacting teachers' instructional practices.

The results of this study indicate that a significant proportion of English as a Second Language (ESL) teachers working in public schools in the UAE hold a favorable perception of OTPD. This finding aligns with the previous research exploring the attitudes of English as a Foreign Language (EFL) and ESL teachers towards OTPD, which has also reported positive perceptions (Little & Housand 2011; Chu 2013; Masters et al. 2010).

However, Çaliskan, E. and Caner's (2022) investigation of teachers' attitudes towards technology-based professional development programs in Turkey found that teachers were generally skeptical of these programs. The study highlighted issues such as lack of interactivity, technical problems, and limited opportunities for peer interaction as reasons for teachers' negative attitudes towards OTPD. Another study by Al-Shehri (2020). found that English language teachers in Saudi Arabia had mixed attitudes towards online professional development programs. Al-Shehri's study concludes that while some teachers found online professional development to be convenient and useful, others had concerns about the quality of the programs and the lack of face-to-face interaction with trainers and peers.

Moreover, the vast majority of the teachers (90%) mentioned that the course management system such as Microsoft Teams was the most used method to deliver professional development.

Furthermore, a majority of more than 70% of the teachers participated in an online professional development format because it was mandatory. Other reasons for participation including a) less expensive, b) more convenient, and c) there was no option to participate face-to-face were picked by about half the participants. Comparison of these findings with those of others confirms that mandatory participation in OTPD serves as the greatest motivator for teachers (Garet et al. 2001; Darling-Hammond et al. 2009). Meanwhile, Chang and Chen (2016) found that teachers who participated in online professional development reported OTPD to be more flexible, convenient, and cost-effective compared to traditional face-to-face professional development. These findings suggest that the teachers' motivation to participate in OTPD is influenced by external factors such as institutional requirements and cost-effectiveness.

5.3 Influence of Years of Experience, Gender, and Pedagogical and Technological Background on Perception of OTPD

One interesting finding of the study was that the perception of OTPD by ESL teachers in the UAE is significantly influenced by their pedagogical background and years of experience. The results also didn't detect any significant influence of gender and technological background on the perception of OTPD by ESL teachers in the UAE.

According to the results, there is a significant relationship between years of experience and perception of OTPD. Specifically, the results showed that the perception of OTPD increases as the years of experience of the teachers increase. This finding aligns with previous studies that found a positive relationship between years of experience and teacher professional development (Desimone et al. 2016; Gatbonton 2008; Fischer et al. 2018).

Moreover, the findings of this study revealed that there is no significant relationship between gender and perception of OTPD. Although there is limited literature on the relationship between gender and perception of OTPD, the available studies have produced inconsistent findings. For example, while some studies found no significant relationship between gender and perception of OTPD (Mahmoudi & Ozkan 2015; Anasi 2018; Emence 2022), others found that female teachers have more positive attitudes towards online learning than their male counterparts (Yu 2021). Additionally, a few studies found that male teachers are more likely to participate in online professional development programs than female teachers (Scherer & Siddiq 2015).

The findings of this study align with existing literature that suggests that teachers' educational background and qualifications have a significant impact on their perception of OTPD. Previous studies have found that teachers with higher levels of education are more likely to embrace and adopt technology in their teaching practices (Kay 2006; Teo 2009). Additionally, teachers with multiple degrees may have had more exposure to technology and online learning during their academic pursuits, which could make them more comfortable with and accepting of OTPD (Agyei & Voogt 2010). Therefore, providing additional training and support for teachers with lower qualifications could help to improve their perception and adoption of OTPD.

Moreover, factors that influence teachers' perceptions of OTPD vary across contexts. For instance, a study by Canals and Al-Rawashdeh (2019) Jordan found that teachers' perception of OTPD was significantly influenced by their age, educational level, and years of experience. In contrary with the findings of this study, a study by Wu et al. (2022) in China found that teachers' perceptions of OTPD were influenced by their knowledge of technology, self-efficacy, and perceived usefulness of technology. Another study by Ansyari, Groot and De Witte (2022) in Indonesia found that ESL teachers' perceptions of OTPD were influenced by their gender, age, and years of experience.

Thus, it can be concluded that the factors that influence teachers' perceptions of OTPD are context-specific and may vary across different educational settings. It is, therefore, important for policymakers and educators to consider the unique characteristics of their context when designing and implementing OTPD programs.

5.4 ESL Teachers in the UAE's Perceived Barriers towards OTPD participation

On the question of the perceived barriers to ESL teachers' active participation in OTPD activities in public schools in the UAE, the study's findings provide valuable and interesting insights. The most striking finding regarding this research question was that the repetition of topics offered in OTPD is the most significant perceived barrier by ESL teachers, which has not been previously reported in the literature. However, the findings are in line with previous studies that have identified lack of time, relevance, support, and incentives as significant barriers to participation in professional development activities (Korthagen 2017; Kwakman 2003). The

results are also in agreement with Cheng and Chan's (2016) study that have identified the need for varied and relevant professional development topics to increase teacher engagement and motivation.

Additionally, 46.7% of the participants reported a lack of incentives as a barrier for participating in OTPD. This finding also further supports the idea that incentives such as rewards, recognition, and career advancement opportunities can motivate teachers to engage in professional development activities (Muijs & Harris 2007).

On the other hand, the majority of teachers disagree with the perceived barrier that they do not have enough technological knowledge to participate in OTPD activities. Comparing this finding with the others, for example, Fang, Chan and Kalogeropoulos (2021) identified TK as the greatest barrier to Australian teachers in OTPD. The explanation of the UAE's results may be attributed to the increasing use of technology in education locally and the efforts of the UAE government to promote digital literacy among teachers (Ministry of Education 2021). However, it is worth noting that 20.7% of the teachers still agreed with this statement, indicating that some teachers may need more support in this area.

The study also identifies other perceived barriers such as conflicts with work schedule, lack of collaboration and feedback, and unsuitable program duration. These findings are keeping with previous studies that have found that the timing, duration, and format of professional development programs can affect teacher engagement and participation (Desimone 2009).

Finally, the present study highlights the importance of offering diverse and relevant professional development opportunities that cater to the specific needs of ESL teachers. The study also highlights the need for varied and relevant professional development topics, incentives, and support for teachers who may need more technological knowledge.

5.5 Recommendations

By identifying ESL teachers' perception and barriers to OTPD in public schools in the UAE, policy and practice in the UAE and other contexts are able to enhance the effectiveness of professional development programs for teachers. To do so, OTPD programs should be designed and implemented with consideration for individual teacher characteristics, such as years of

experience, gender, and pedagogical and technological background. The current data also highlights the importance of tailoring OTPD programs to address the needs of ESL teachers in public schools by aligning content with curricula and differentiating resources to address individual needs. It is also recommended by OTPD providers to offer real-time solutions and connect ESL teachers with people outside their geographic area, to support their professional development and teacher learning process. Taken together, the study suggests providing sustained high-quality TPD to support teacher professional development and ultimately enhance student learning outcomes.

The study revealed significant outcomes to add to the available literature. However, the study focused on the influence of years of experience, gender, and pedagogical and technological background, while other factors, such as motivation, attitudes, and prior experiences with TPD, were not examined in this study but may also influence perceptions and experiences with OTPD.

Finally, the study did not examine the impact of OTPD on student learning outcomes or teacher practice, which could provide additional insights into the effectiveness of OTPD. Future studies could consider incorporating measures of teacher practice and student learning outcomes to further investigate the impact of OTPD on ESL teachers in public schools.

5.6 Limitations

This study provides valuable insights into ESL teachers' perception and barriers of OTPD in public schools in the UAE. However, there are some limitations to the study.

First of all, the survey was conducted electronically, which requires participants to have a certain technological background. Consequently, administering the tool online may have provided some biases by attracting participants with a stronger technological knowledge, which also can explain strong agreement with technological knowledge in the findings. However, the findings of the study suggest no significant relationship between technological knowledge and ESL teachers' perception of OTPD. It is recommended that future studies consider non-electronic surveys to administer the survey.

Secondly, the sample was limited to ESL teachers in public schools in the UAE, which may not be representative of all ESL teachers in the UAE or in other contexts. This can limit generalizing the findings to other populations or settings.

Finally, the study relied solely on quantitative data which although provided significant findings, might not fully capture the complexity nature of ESL teachers' perceptions and perceived barriers of OTPD. In self-reported data, there are several biases that could affect the results like social desirability bias. Therefore, qualitative tools such as focus groups and interviews could lead to better understanding and in-depth comprehension of the topic.

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Appendices

Appendix A: Survey Instrument

Perception and Perceived Barriers of OTPD; A Survey for ESL Teachers in UAE Public Schools

Dear ESL teachers,
I have invited you to fill out the following online survey. This survey aims to determine teachers' perceptions of Online Teacher Professional Development (OTPD) and the perceived barriers to effectively engaging in OTPD activities in public schools in the UAE.
I also assure you that the answers provided by any participant in this survey will be kept strictly confidential, and anonymity will be maintained throughout all the study procedures. Your participation is voluntary, and you can withdraw from the study anytime. The average time to complete this survey is around 10 minutes.
By completing this questionnaire, you consent to participate in the following survey activity, and you understand that the data collected will be used for educational research purposes only.
Your participation is highly appreciated; many thanks.

Scholar Name: Osama S. M. Alarafeen
Scholar email: 21002477@student.buid.ac.ae
Supervisor Name: Pro. Christopher Hill
Supervisor email: christopher.hill@buid.ac.ae

* Required

Section 1

1. Are you a current or previous teacher at the Ministry of Education (MOE)/ Emirates School Establishment (ESE)? *

- ◯ Yes
- ◯ No

2. Do you agree to participate in the survey *

- ◯ Yes
- ◯ No

Personal Data

3. In which Emirate do you currently teach? *

- ◯ Abu Dhabi
- ◯ Dubai
- ◯ Sharjah
- ◯ Ras Al Khaimah
- ◯ Fujairah
- ◯ Ajman
- ◯ Umm Al Quwain

4. What grade level do you currently teach? *

- ◯ KG & Cycle 1 (grades KG1- Grade 4)
- ◯ Cycle 2 (Grades 5-8)
- ◯ Cycle 3 (Grades 9-12)

5. How many years have you been a practicing teacher? *

The value must be a number

6. What is your gender? *

- ◯ Male
- ◯ Female

7. Which age group do you belong to? *

- ◯ Less than 30
- ◯ 31-39
- ◯ 40-49
- ◯ above 50

8. What is your nationality? *

9. What is the highest degree you hold? *

- ◯ BA or BS
- ◯ MA/ MEd / MS
- ◯ Multiple MA / MEd / MS
- ◯ PhD or Ed.D
- ◯ Other

Technological and Pedagogical Knowledge

10. **Technological Knowledge Scale (Strongly Disagree to Strongly Agree)** *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I know how to solve my own technical problems. I can learn technology easily.	◯	◯	◯	◯	◯
I keep up with important new technologies.	◯	◯	◯	◯	◯
I frequently play around with the technology. I know about a lot of different technologies.	◯	◯	◯	◯	◯
I have the technical skills I need to use technology.	◯	◯	◯	◯	◯
I have had sufficient opportunities to work with different technologies.	◯	◯	◯	◯	◯

11. **Pedagogical Knowledge (Strongly Disagree to Strongly Agree)** *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I know how to assess student performance in a classroom.	◯	◯	◯	◯	◯
I can adapt my teaching based upon what students currently understand or do not understand.	◯	◯	◯	◯	◯
I can adapt my teaching style to different learners.	◯	◯	◯	◯	◯
I can assess student learning in multiple ways.	◯	◯	◯	◯	◯
I can use a wide range of teaching approaches in a classroom setting.	◯	◯	◯	◯	◯
I am familiar with common student understandings and misconceptions.	◯	◯	◯	◯	◯
I know how to organize and maintain classroom management.	◯	◯	◯	◯	◯

Perception of Online Teacher Professional Development

12. Have you ever participated in any formal professional development that was delivered online (completely online, hybrid format, etc.)? *

- ◯ Yes
- ◯ No

13. What was the topic of the professional development? (tick all that apply) *

- ☐ Knowledge and understanding of my subject field(s)
- ☐ Pedagogical competencies in teaching my subject field(s)
- ☐ Knowledge of the curriculum
- ☐ Student assessment practices
- ☐ ICT (information and communication technology) skills for teaching
- ☐ Student behaviour and classroom management
- ☐ School management and administration
- ☐ Approaches to individualised learning
- ☐ Teaching students with special needs
- ☐ Teaching in a multicultural or multilingual setting
- ☐ Teaching cross-curricular skills (e.g. creativity, critical thinking, problem-solving)
- ☐ Analysis and use of student assessments
- ☐ Other

14. How was the professional development delivered? (tick all that apply) *

- [ ] • Course management system such as Microsoft Teams
- [ ] • Video conferencing
- [ ] • Self-paced learning online modules(LearningCurve\Coursera\Linkedin PD...etc)
- [ ] Other

15. What is the primary reason you participated in the professional development in an online format rather than a face-to-face format? (select all that apply) *

- [ ] It was mandatory that I participate online.
- [ ] It was more convenient to participate online.
- [ ] There was no option to participate face-to-face.
- [ ] It was less expensive to participate online.
- [ ] Other

16. To what extent have your online professional development experiences been beneficial to you?

*

- ◯ Not at all beneficial
- ◯ Slightly beneficial
- ◯ Moderately beneficial
- ◯ Largely beneficial
- ◯ Extremely beneficial

17. What about it wasn't beneficial? *

18. Please indicate whether you agree with the following statements. The online professional development in which I participated provided the following benefits: (Strongly Disagree to Strongly Agree) *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I could go at my own pace.	◯	◯	◯	◯	◯
I could access the materials anytime.	◯	◯	◯	◯	◯
I was able to connect with people outside of my immediate geographic area.	◯	◯	◯	◯	◯
It provided real-time solutions to my problems in the classroom.	◯	◯	◯	◯	◯
It gave me access to resources not available in my local area.	◯	◯	◯	◯	◯
It provided ongoing support for my needs in classroom practices.	◯	◯	◯	◯	◯
It provided me the opportunity to reflect on my teaching and discuss it with other educators.	◯	◯	◯	◯	◯
I am happy I participated in the PD.	◯	◯	◯	◯	◯
The PD was a good use of my time.	◯	◯	◯	◯	◯
The content of the PD was relevant to my classroom instruction.	◯	◯	◯	◯	◯

19. How strongly do you agree or disagree with the following statement "I was able to apply what I learned from my PD." *

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

20. What, if anything, primarily prevented you from applying what you learned from the online PD to your classroom instruction? *

- ◯ It wasn't relevant to my teaching.
- ◯ I didn't have the tools/materials I needed.
- ◯ It was not allowed by my school's policies/curriculum.
- ◯ I didn't have time to plan instruction based on what I learned.
- ◯ I meant to implement what I learned, but never got around to it.
- ◯ Other

21. **Likelihood of participating in various forms of online PD**

Please rate your level of interest in the following types of online professional development experiences (not at all interested to extremely interested) *

	Not at all interested	Not interested	Might be interested	Slightly interested	Extremely interested
An expert teacher app An app for your phone or tablet that allows you to ask a question for an educational expert. Suppose you have a lesson that flops; you could describe the lesson and its outcome in the app and an educational expert will respond with ideas and suggestions.	○	○	○	○	○
Online video lesson study An online forum that allows you as part of a community of teachers to upload videos of instruction, where you and other educators can reflect on and learn from the video. Sometimes you would upload a video; other times colleagues from across the globe would upload a video for reflection and comment	○	○	○	○	○
A video library A video library of teachers modeling exemplary literacy instruction (e.g., word study, read aloud) that allows for online discussion with other	○	○	○	○	○

educators, including scheduled chats about the instruction.					
Realtime instructional feedback You wear a microphone, camera, and earpiece and receive real-time feedback from an outside expert while teaching.	○	○	○	○	○
Online community of practice Join a small group of others who are interested in developing teaching skills on a particular topic (e.g. word study, prosody, inferential comprehension). Learn more about the topic through readings, videos, etc. Then live chat to discuss the topic and share what happened when you implemented strategies with your students.	○	○	○	○	○
Interactive video modules Self-paced video modules that provide interactive lecture experience on instructional topics (e.g. social-emotional learning, literacy instruction, etc).	○	○	○	○	○
Badges for participation Earn badges for engaging in various online professional development activities.	○	○	○	○	○

Badges to

Online Teacher Professional Development Barriers

22. How strongly do you agree or disagree that the following present barriers to your effective participation in online professional development? *

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
OTPD program is not relevant to my professional needs	◯	◯	◯	◯	◯
There is a lack of employer support.	◯	◯	◯	◯	◯
I don't have enough technological knowledge	◯	◯	◯	◯	◯
OTPD conflicts with my work schedule.	◯	◯	◯	◯	◯
I do not have time because of family responsibilities.	◯	◯	◯	◯	◯
OTPD program duration is not suitable.	◯	◯	◯	◯	◯
The program offered does not support collaboration and feedback.	◯	◯	◯	◯	◯
OTPD facilitators are underqualified	◯	◯	◯	◯	◯
There are no incentives for participating in OTPD.	◯	◯	◯	◯	◯
Topics offered in OTPD are repeated.	◯	◯	◯	◯	◯
students sharing their thoughts and processes of how they	◯	◯	◯	◯	◯

23. Are there any other barriers that limit you from participating effectively in Online Teacher Professional Development?

technique by participating in a virtual classroom using a virtual reality headset.

Appendix B : BUiD Ethic Form Approval

23 January 2023

To: Emirates School Establishment

This is to certify that **Mr. Osama Saleem Mohammad Alarafeen** with Student ID number **21002477** is a registered student in Master of Education in Information and Communication Technology programme at The British University in Dubai.

Mr. Alarafeen is currently working on his dissertation titled *"Online Teacher Professional Development' ESL Teachers Perceptions and Perceived Barriers in Public Schools in the UAE"*. The ethic form to conduct this research has been approved and he is required to gather data through surveys.

Your permission for him to conduct his research in your organisation is hereby requested. Any support provided to him in this regard will be highly appreciated.

This letter is issued at the student's request

Yours sincerely,

Mira Hamzeh
Head of Marketing, Admissions & Student Services
The British University in Dubai

Appendix C : Data Collection Approval from ESE

مؤسسة الإمارات للتعليم المدرسي
EMIRATES SCHOOLS ESTABLISHMENT

تسهيل مهمة الباحث أسامة سليم من الجامعة البريطانية بدبي	**Facilitating a researcher's study, Osama Saleem from The British University in Dubai**
الزملاء والزميلات مديري ومديرات المدارس المحترمين تحية طيبة وبعد يقوم الباحث أسامة سليم بعمل دراسة بحثية من الجامعة البريطانية بدبي، حيث إن الباحث حالياً بصدد جمع البيانات للبحث بعنوان: **"تصورات معلمي اللغة الإنجليزية للتطوير المهني للمعلمين عبر الانترنت وعوائقها لجميع مدارس الدولة. "** وعليه ندعو جميع معلمين اللغة الإنجليزية بتسهيل مهمة الباحث لتنفيذ الدراسة. علما أن جميع إجاباتكم ستكون سرية وستضيف قيمة إلى نتائج هذا البحث الذي سيتم استخدامه لأغراض البحث العلمي والتطوير الأكاديمي الاستبانة: https://forms.office.com/r/Drt9qzVqTe شكرا لك على وقتكم وتعاونكم،	**Dear School Principals,** The researcher, Osama Saleem, from the British University in Dubai, is conducting a research study and is currently in the process of collecting data for his research dissertation entitled "**ESL Teachers' Perceptions of Online Teacher Professional Development and its Barriers in the UAE Public Schools ".** Therefore, we would like all **English teachers** to facilitate this task in collecting the data for her final research. Please note that all information will be kept confidential and will only be used for scientific research and development purposes. Questionnaire: https://forms.office.com/r/Drt9qzVqTe Thank you for your time and support!