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**The influence of a group of Chinese EFL teachers' beliefs on lesson planning with video-based synchronous computer mediated communication: A qualitative multiple case study**

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## Abstract

In recent years, Video-based Synchronous Computer Mediated Communication (VSCMC) has been applied in EFL education for young Chinese learners. VSCMC teaching, as distinctive from face-to-face teaching, brings numerous planning challenges for teachers using technology. Research has shown that teacher beliefs significantly affect lesson planning for technology integration. However, teacher beliefs towards VSCMC specifically have been insufficiently studied in the field of EFL education for young learners. The purpose of this qualitative multiple case study was to explore how teacher beliefs influence lesson planning regarding VSCMC teaching. Six participants in the Chinese context were interviewed in the study. The results indicated that teachers had transitional pedagogical beliefs, strong self-efficacy beliefs, and a complex set of value beliefs towards VSCMC teaching. Accordingly, these beliefs motivated them to teach in VSCMC settings in particular ways and influenced their lesson planning processes in terms of determining learning objectives, designing course content, and choosing teaching methods.

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## Chapter 1: Introduction

Technological advances have altered our means of communication (Kern, 2006) as well as English as foreign language (EFL) Education (Wei, 2018). Given the increasing number of EFL learners (1.5 billion according to Beare, 2019), technology has played a critical role in EFL education (Shadiev & Yang, 2020). Among numerous forms of technology integration, Video-based Synchronous Computer Mediated Communication (VSCMC) (i.e., videoconferencing) has become a popular delivery mode of language education (Chun et al., 2016; Petersen & Sachs, 2015; Tecedor & Campos-Dintrans, 2019) due to the "anywhere and anytime" affordances of the technology (Stockwell & Hubbard, 2013).

The implementation of VSCMC has paved novel ways for language instruction (Blake, 2016), whereby teachers are confronted with challenges in terms of the adaptation of teaching methods (Baralt & Morcillo Gomez, 2017). Research shows that teacher beliefs significantly affect teaching practice and technology integration (Basturkmen, 2012; Kagan, 1992; O'Neal et al., 2017; Pajares, 1992). Much research about VSCMC has been conducted in terms of its benefits to language education (Chen & Yang, 2014; Lim & Pyun, 2019; Yen et al., 2015), the evaluation of pedagogical tools (Guichon & Cohen, 2014), the analysis of teaching behavior (Kozar, 2016), and the teacher training (Heiser et al., 2013; Satar, 2013). However, as I shall detail below, research concerning teacher beliefs about VSCMC is scarcely found.

To situate my research, I will introduce the Chinese EFL context in the next section of this chapter.

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## **EFL Education in China**

English has obtained a critical role in K-12 education in China (Xiao, 2020). The Chinese government values English as a vital means to promote modernization of the nation (Liang, et al., 2020). Individuals would deem English as a key for self-development both in education and career (Fang, 2018). Accordingly, the ever-increasing learning demand of EFL education in China values an early entry to learning English (Hu, 2007; Kirkpatrick, 2011). The current language policy introduces English as one of the compulsory subjects for all primary school students in China (MoE, 2001). As a result, it is reported that more than 65 million Chinese primary school students learn English as a foreign language (MoE, 2019).

The implementation of VSCMC with young Chinese EFL learners has occurred to an increasing degree in recent years. Thousands of commercial schools have been established in China to meet the learning needs of young EFL learners. The estimated market value of EFL commercial schools is approximately USD 10.5 billion (Huang & Tian, 2019). Given the flexibility of VSCMC, numerous online EFL commercial schools (e.g., VIPKID, VIPJR, and 51Talk) have offered VSCMC courses to young learners over the past eight years. As a result, it is reported that China has 14.8 million online language learners (iResearch, 2015).

Understanding the emerging phenomenon of VSCMC in EFL education for young learners in China is therefore a timely, relevant, and practical research endeavor.

Following this, I will present my role as the researcher.

### **Researcher's Role**

The research topic is critically relevant to me. I have had long-standing expertise in online

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instruction and course development for young EFL learners in China. As an experienced online EFL teacher, I have explicit beliefs towards VSCMC. I value the development of technology and the benefits it brings to EFL teaching. However, I also have concerns about technological barriers that EFL teachers commonly experience in engaging with student-centered pedagogy. Hands-on activities, as essential components of young children's class, are challenging to be incorporated in this context. Moreover, it is also challenging to engage students with teamwork through breakout groups. Specifically, teachers can only interact with one group of students at a time due to the technological constraints. Without teacher's supervision, students in other groups often feel confused and are off the task. While teaching students with VSCMC, I have also encountered technical challenges, such as Internet delay, manipulation of technologies and broken devices. It is clear to me, given my experiences, that online classroom management is not the same as it is in a face-to-face (i.e., in-person) class.

Given my decade-long teaching and curriculum writing experiences in this context, I have often observed teachers' needs in terms of VSCMC teaching, compared teacher opinions towards different online platforms, and attended to student retention rates. My prior experience in this context has been very helpful in understanding my role as a researcher.

Moreover, given my Chinese nationality, Han ethnicity and first language Mandarin backgrounds, I am able to appreciate the challenges that the teachers in my study face.

In the next section, I will present the current problems regarding VSCMC teaching.

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## Statement of the Problem

According to Mei et al. (2018), research about VSCMC is urgently needed in China due to how teachers in this context make inefficient use of technology. Effective technology integration "does not just entail learning new technology...it also involves a deepening knowledge of how students respond to and learn in online settings" (Hewett & Powers, 2007, p. 2). More specifically, the ineffectiveness of technology integration in EFL education may pertain to the limited use of technology in EFL teaching (Tour, 2015), lack of understanding of technology integration in EFL education (Li & Walsh, 2011), and the marginalization of technology in foreign language classrooms (Burston, 2014). Besides, VSCMC environments discriminate from the face-to-face setting in many ways, in terms of the integration of video, audio, text into language teaching (Wang, 2006). VSCMC makes EFL teaching more challenging (Baralt & Morcillo Gomez, 2017; Wang, 2006).

Notwithstanding that VSCMC overcomes the limitation of geographic locations (O'Dowd, 2018), it has brought challenges for both teachers and learners. On the one hand, research has shown that learner attention span is shorter in the VSCMC context than in the face-to-face context (Stickler & Shi, 2015). When the time and date are fixed, students may also face scheduling problems, especially when the teachers and students are in a different time zone. Moreover, virtual interactions, with occasional technical issues during the implementation of VSCMC, may result in higher cognitive load and anxiety of learners (Hampel & Stickler, 2005).

On the other hand, teachers need to face challenges such as adapting to a new role (Hutchins, 2003), technical and internet connection problems (Lee, 2009), a holistic

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understanding of learning online (Rubens & Southard, 2005), techniques of using technology (Wang, 2006), and a shift in curriculum design and choice of teaching content (Cook & Grant-Davis, 2020). Teachers and students are not physically present, resulting in that it might be hard for teachers to see learners' facial expressions and body language (Lee et al., 2007). Finally, VSCMC has been found to be more demanding and time-consuming for teachers than face-to-face teaching (Worley & Tesdell, 2009). Many Chinese EFL teachers remain resistant to integrating technologies into their teaching practice (He et al., 2015).

As my literature review below shows, research on VSCMC classes with young EFL learners is limited. Moreover, this research focus in the Chinese context is non-existent. Currently, EFL VSCMC research in China has focused on adult learners, including the positive effects of text-based SCMC (Tian, 2015) and EFL resources integrated into instant messenger (Ling et al., 2016) and cloud drive (Lu, 2016). This is a significant gap in the research since young learners differ from adult learners in multiple facets (Knowles, 1984), such as their short attention span, a need for five senses stimulated, and difficulty in understanding abstract concepts (Setyaningsih, 2007). Given the uniqueness of pedagogy aimed at youth in general, it is imperative to examine Chinese EFL teacher beliefs about VSCMC with young learners in particular.

Teacher belief is broadly defined as unconscious assumptions about knowledge, learning, teaching, context, and other educational issues (Ertmer, 2005). Teacher beliefs significantly affect online EFL teaching practice (Basturkmen, 2012; Kagan, 1992; Pajares, 1992), predict successful technology use (Ertmer, 2005; Mouza, 2011; O'Neal et al., 2017; Tondeur et al.,

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2008), and influence lesson planning and materials selection (Chan & Lam, 2003; Kitsantas & Baylor, 2001; Moallem, 1998). Meanwhile, teacher beliefs may result in problematic issues, such as refusal to use technology (Brush et al., 2008), failure in integrating technology (O'Neal et al., 2017), and inconsistency with their face-to-face practice (Ertmer, 2005; Hsu, 2013). That said about their significance in VSCMC teaching practice, teacher beliefs about VSCMC with young learners, an inadequately studied field (Coyle & Reverte Prieto, 2017; Mei et al., 2018), warrant more research.

I will now discuss the contributions of my research.

### **Contributions**

This study brings novel insights into the knowledge base associated with VSCMC teaching and planning. This research has aimed at exploring how Chinese EFL teacher beliefs affect their lesson planning for VSCMC teaching and provides knowledge for EFL education in China. Participants are offered opportunities to reflect on their beliefs and effective online teaching practices with young learners. After examining the implications of this study, teachers, teacher-trainers, and administrators will be able to address potential issues concerning VSCMC teaching by understanding the influence of teacher beliefs on lesson planning.

In this thesis, I first present my conceptual framework. I deemed the task of developing a theoretical framework to be unnecessary. I judged the conceptual framework to be sufficient given the exploratory nature of this study. Meanwhile, given that conceptual framework often emerges from literature review, I decided to combine literature review and conceptual framework. Next, I justify the choice of multiple case study research methodology and delineate

my research plan. I interviewed six participants who had more than three years of VSCMC experience with young learners in English commercial schools in China. In the methodology chapter, I have decided to provide details about the research sites and contexts, thereby making the findings more comprehensible. Following this, I present the findings of each case in turn descriptively in the first part of the findings chapter. Then, I present the comparison of the cases in the second part of the findings chapter. In the discussion chapter that follows, I analyze these findings through referring to the literature review. Finally, I conclude with the theoretical and concrete pedagogical implications associated with my study.

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## **Chapter 2: Conceptual Framework**

This chapter aims to develop the conceptual framework for the current study. First, I discuss the relationship between literature review and conceptual framework. Then, to offer a broad context for my research, I review relevant literature in three domains, namely technology integration, factors influencing technology integration, and lesson planning. The literature is presented to serve the purpose of this research: to investigate how teacher beliefs about EFL VSCMC teaching influence lesson planning. The literature review aims to identify the research gap pertaining to VSCMC teaching for young EFL learners and develop conceptual framework for this study.

Next, I present the conceptual framework that emerges from the literature review. The conceptual framework consists of five concepts, namely VSCMC, lesson planning, pedagogical belief, self-efficacy belief, and value belief. Finally, I present my research question based on the conceptual framework.

### **Conceptual Framework and Literature Review**

As Creswell (2014) and Miles and Hubbert (2014) note, the terms literature reviews, conceptual frameworks, and theoretical frameworks are often used interchangeably. According to Merriam and Simpson (2006), a literature review, a conceptual framework, and a theoretical framework serve similar purposes, such as building a foundation, conceptualizing the study, and providing a reference point.

However, Creswell (2014) argues that there are distinctions between literature reviews, conceptual frameworks, and theoretical frameworks. The literature review demonstrates a need

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for the research study. A theoretical framework is used to test the theory. Since qualitative research is often exploratory in nature, a conceptual framework is critical to situate the study. In particular, as Rallis and Rossman (2012) argue, key constructs, pertinent research, and the researcher's perspective constitute a conceptual framework, serving as a road map to navigate the research question, research approach, design, data collection, and analysis.

The conceptual framework indicates the process of “reviewing and synthesizing information from a related body of knowledge that provides the intellectual underpinning to guide the development and conduct of an empirical research study” (Savin-Baden & Howell Major, 2013, p.138). According to Merriam and Simpson (2006), the literature review aims to explore relevant topics of the study. Moreover, Merriam and Simpson (2006) argue that the literature review often aims to develop a conceptual framework.

In the current study, I will review literature pertaining to technology integration, factors influencing technology integration, and lesson planning. The literature review familiarizes readers with the major topics of the current study. It is important to note that my project, as a qualitative study, does not aim to test theory but to explore a particular phenomenon. As such, I have decided that a theoretical framework is unnecessary, a common decision found in the qualitative research literature (Creswell, 2014). In contrast, I decided to go straight to the construction of a conceptual framework based on the literature review. The fundamental concepts of the conceptual framework emerge from the literature review, thereby supporting the development of the research question, data collection, and data analysis.

Given the choice of conceptual framework, I will review pertinent literature about

technology integration, factors influencing technology integration, and lesson planning in the following sections.

## **Literature Review**

### ***Technology Integration***

Many scholars define technology integration as the use of varied technological tools (e.g., computers, laptops, mobile devices, and software) to enhance teaching and learning (Beauchamp et al., 2015; Danniels et al., 2020; Hew & Brush, 2007; Labbo et al., 2010). Ertmer (2005) distinguishes the lower level of technology use (i.e., the use of technology does not impact learning) from higher-level technology use (i.e., the use of technology promotes learning). According to Earle (2002), "technologies must be pedagogically sound... [and] improve the pedagogy" (p. 10).

The use of technology has been categorized in various ways. Many scholars have investigated technology for teaching (e.g., Bebell et al., 2004; Skinner, 2016) and technology for learning (e.g., Kyle et al., 2021; Lock et al., 2021; Mayes, 2018;). Comi et al. (2017) list five uses of technology (i.e., knowledge transmission, media education, active involvement, backstage activities, and communication) in teaching practice. Mama and Hennessy (2013) propose four categories of technology use, namely integrational (i.e., technology is used for accomplishing learning objectives), incremental (i.e., technology is used to enhance teaching), incidental (i.e., technology is occasionally used for managerial tasks), inimical (i.e., technology is purposefully avoided). Tondeur et al. (2017) assume that technology use can either be teacher-centered or student-centered.

A great number of studies have demonstrated that technology integration has a positive impact on education. Four meta-analyses have confirmed the benefits of different technological tools, including mobile devices for university students (Sung et al., 2016), touchscreen learning for young children (Xie et al., 2018), digital games for K-16 students (Clark et al., 2016; Zhao et al., 2021). Moreover, technology integration is a critical element in favor of 21st-century competencies (Ertmer et al., 2015).

More recently, Lee et al. (2020) conducted a meta-analysis of the effects of technology integration on language education. On the basis of their research, they argue that technology integration has a positive impact on language and literacy education. Moreover, technology integration is more effective in EFL education and older English language learners. Even though they only reviewed three articles about writing for English learners, they concluded that technology integration was more effective in writing than in reading. Moreover, they suggest that technology integration cannot support cooperative learning among English language learners due to the limited English proficiency of these learners.

Bagshaw (2016) argues that, notwithstanding the benefits of technology integration, issues regarding teaching and learning still arise in school. Voogt and McKenney (2017), for example, contend that technology integration is challenging for teachers in that they find technology distracting. Collins and Halverson (2018), to cite another example, found that teachers are challenged by the effort needed to learn new techniques. On the other hand, learning is disrupted due to the negative emotions (e.g., anxiety, concerns, and confusion) (Margot et al., 2019; Piccoli et al., 2001), lack of patience after exposure to multimedia (Fullan, 2013), and

inadequate technological knowledge and skills (Almanthari et al., 2020). As a result, technology integration fails to bring expected outcomes (Biagi & Loi, 2013; Hur et al., 2016; OECD, 2015). Many scholars argue that the disappointing results are not caused by technology per se but teachers who use them (Comi et al., 2017; Ertmer & Hruskocy, 1999; Porrás-Hernández & Salinas-Amescua, 2013; Tondeur et al., 2017).

Technology use also varies according to age. Several studies were conducted by the Canadian Paediatric Society (CPS) about the potential benefits and risks associated with the use of technology by young children (2017) and teenagers (2019). They found that the use of some technologies could promote physical activities, record activities, and promote weight control. However, the misuse of technology potentially might cause problems in terms of attention while driving, weight control, sleep deprivation, and mood swings. They conclude that positive technology integration is aided by knowing individual student characteristics.

So far, I have discussed technology integration, its benefits and challenges. In my next section, I will review the literature regarding computer-mediated communication.

**Computer-Mediated Communication (CMC).** The popularity of computers and the internet gave birth to Computer-Assisted Learning (CAL) (Hwang et al., 2011) (i.e., online learning, Anderson, 2008). CAL is defined as the use of computers and the internet in teaching and learning (Serin, 2011). Previous research demonstrates that CAL individualizes learning (Bloomfield et al., 2010) through offering a learning environment with rich multimedia (e.g., games, graphs, animation) (La Velle et al., 2003), interactivity, and simulations (Savelsbergh et al., 2016), self-learning and motivation (Serin, 2011), teaching and learning flexibility (Županec

et al., 2013), and authenticity of tasks and problems (Hwang et al., 2011).

Given the numerous benefits, CAL has been applied in language education, namely computer-mediated communication (CMC). CMC is conceptualized as the “communication that takes place between human beings via the instrumentality of computers” (Herring, 1996, p. 1), involving various modes of information transmitting within communication systems. Terms, such as CMC, computer-assisted language learning (CALL), computer-assisted language teaching (CALT), and technology-enhanced language learning (TELL), are often used interchangeably by researchers (Beatty, 2013).

More recently, Parmaxi and Zaphiris (2017) confirm the benefits of CMC on language instructions through a review of the pertinent literature. They examined numerous tools for CMC (such as blogs, Wikis, and social networking sites) and argued that the implementation of CMC was grounded in divergent learning theories (e.g., constructivism, situated learning theory, and sociocultural theory). Although different tools or platforms may bring specific challenges (e.g., technical difficulties, students’ capabilities of using technology, and learner and teacher training), CMC supports EFL learning in multiple aspects, including language skills, interaction, cultural awareness, and learning autonomy. They suggested that effective lesson planning should involve consistent technology use and align with learning objectives.

CMC is categorized in terms of time (i.e., synchronous and asynchronous) and modality (i.e., text, audio, and video) (Hubbard, 2014). The last decade has witnessed an increasing interest in the implementation and study of Synchronous Computer-mediated Communication (SCMC) in the field of language education (Hubbard, 2014). For example, Yu et al. (2016)

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developed a user-centered design through SCMC for Chinese university students. They employed Automatic Speech Recognition technology and interactive activities to promote the students' English communication skills. They concluded that students could improve their English effectively, particularly introverted students. Their design also promoted authenticity in language learning in a student-centered manner, in that students could find their favorite topics.

Since the 1990s, the research on SCMC has increased dramatically with the focus on text-based SCMC (TSCMC), namely the real-time communication in written mode with the integration of oral and written language (Rassaei, 2017). Numerous early attempts have been made to research TSCMC, such as its effects on language production (Kern, 1995), promoting negotiation of meaning (Blake, 2000; Smith et al., 2003), and equal participation (Roed, 2003).

Recently, Ajabshir (2019) explored the effect of synchronous and asynchronous text-based CMC on EFL learning. In this study, 106 Iranian students were recruited and randomly assigned into pairs. Using experimental design, researchers placed students into face-to-face discussions as a control group. Two experimental groups were formed utilising synchronous and asynchronous text-based activities. The results demonstrated that both forms of CMC had positive effects on EFL learning. At the same time, the findings suggested that teachers should make rigorous decisions on the choice of the mode (i.e., synchronous and asynchronous) while taking into account multiple factors (e.g., student preference, teaching purposes, and teachers' technological knowledge and skills).

So far, I have discussed text-based CMC. Similarly, VSCMC is also very frequently used in language education (Petersen & Sachs, 2016), whereas research on VSCMC is less common

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(Hung & Higgins, 2016) due to the greater difficulty in data collection (Hubbard, 2014).

In my next section, I will review the literature specific to VSCMC.

**Video-Based SCMC (VSCMC).** VSCMC indicates that real-time network-based communication takes place in video mode (Murray, 2000), which offers face-to-face communication opportunities (e.g., visual and vocal cues) to resemble real-life conversations (Hung & Higgins, 2016; Stockwell, 2010). VSCMC is very similar to face-to-face communication, whereby interlocutors can still understand each other with visual cues (Petersen & Sachs, 2016).

Notwithstanding that VSCMC and face-to-face communication have many similarities, differences between the two modes still exist, such as the interactive whiteboard, the text chat, the audio, and the video (Wang & Chen, 2012). As a result, the differences lead to divergent learning outcomes, in that VSCMC enhances motivation for language learning (Jauregi et al., 2012), increases awareness of language forms (Hung & Higgins, 2016), engagement, and receiving authentic input (Lee, 2007), builds confidence (Lim & Pyun, 2019; Phillips, 2010), and improves communicative competencies and cultural awareness (Chen & Yang, 2014; Yen et al., 2015). When comparing SCMC to face-to-face teaching, Ziegler (2016) conducted a meta-analysis to demonstrate that SCMC was slightly more interactive than face-to-face teaching. Among the 14 studies included in the meta-analysis, however, only two studies concerned VSCMC environments. As such, the different effects between VSCMC and face-to-face interaction on specific linguistic domains are still vague.

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VSCMC, relative to face-to-face instruction, brings more challenges (Baralt & Morcillo Gomez, 2017; Wang, 2006). Considering the use of technology in online language teaching, researchers explore the difficulties in VSCMC (e.g., design of appropriate activities, assessment of understanding, time management) (Guichon, 2009), the uncertainty of learner comprehension (Guichon, 2010), design and evaluate videoconferencing tools for online language teaching (Guichon, 2010; Guichon & Cohen, 2014). Since the underscoring principles of designing VSCMC teaching activities should be interactive (Acar, 2007), the development of VSCMC activities entails multiple modalities (e.g., spoken and written form, visual cues, gestures) (Hampel & Stickler, 2012) based on teaching experience (Codreanu & Celik, 2013). As such, language teachers should be well-prepared to address the barriers in VSCMC teaching (Guichon, 2010; Satar, 2013).

Most research on VSCMC in the field of second-language learning is primarily conducted concerning adult learners (e.g., Heiser et al., 2013; Jauregi et al., 2012; Kozar, 2016; Lim & Pyun, 2016; Yen et al., 2015). More recently, Ziegler and Phung (2019) investigated the quality of interactions with adult second language learners within different modes of SCMC. Jung et al. (2019) explored adult learners' perception of SCMC courses. Bryfonski and Ma (2020) explored the effects of explicit and implicit corrective feedback in Mandarin class within the SCMC context. Michel and Cappellini (2019) inspected conversational alignment (i.e., interlocutors reuse each other's sentence structures and word choice) in different SCMC contexts. Domanchin (2019) examined learners' use of an online translator as a cognitive tool in an SCMC context.

Scarce attention has been paid in relation to Children's SCMC (Coyle & Reverte Prieto, 2017), let alone in the field of VSCMC concerning young learners (Yu, 2018). After my attempt of searching literature in multiple databases, recent studies pertaining to Children's SCMC include collaborative writing in TSCMC (Pifarré & Li, 2012; Woo et al., 2011), cross-culture communication through multimodal technologies (Chen & Yang, 2014), enhanced awareness in TSCMC (Coyle & Reverte Prieto, 2017).

More recently, one study has investigated VSCMC related to young EFL learners. With regard to students' learning, Ockert (2015) conducted a longitudinal study about 29 EFL elementary school students communicating with their Australian counterparts. The results illustrated that EFL young learners were motivated and engaged in the activities through videoconferencing. The language activities also provided EFL learners with ample comprehensible input and promoted students' endeavors in learning to communicate in English.

So far, I discussed the application of VSCMC as one popular means of technology integration in EFL education. However, limited research has been found regarding VSCMC with young EFL learners.

In my next section, I will look at factors that influence technology integration.

### ***Factors Affecting Technology Integration***

Technology integration is a complex process influenced by many factors (Tondeur et al., 2017). Hew and Brush (2007) propose six influential factors, including the accessibility of resources and support, teachers' knowledge and skills, institutional management, teacher beliefs, assessment, and teaching and subject norms. Turgut and Aslan (2021) conclude six predominant

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factors that influence technology integration in Turkey, namely teachers' technological competency, students' technological competency, technical resources and support, teaching materials, institutional management, and teacher training. Spiteri and Rundgren (2020) reviewed literature about primary school teachers' technology integration. They found four critical factors, namely teachers' knowledge, skills, attitude, and school culture.

Ertmer (1999) categorizes factors that influence teachers' technology integration into two types, namely external factors, and internal factors. First-order or external factors include technology and resources, school management and support, and teaching training. For example, Singh (2019) explored ten EFL teachers' perceptions of technology integration. The result indicated that teachers' technology integration was impeded due to external factors, such as resources, training, and time. Gruba and Chau Nguyen (2019) evaluated the CMC program at a university in Vietnam. They argued that teacher training and school support could be critical to technology integration.

Nonetheless, many scholars argue that it is critical to investigate second-order factors or internal factors, in that the first-order factor is not adequate in the integration of technology in education (e.g., Dong et al., 2019; Spiteri & Rundgren, 2020). Internal factors refer to teachers' knowledge, skills, and beliefs about technology integration (Ertmer, 1999).

Teachers' technological and pedagogical skills are both significant in technology integration (Spiteri & Rundgren, 2020). As an overarching framework, TPACK (Koehler & Mishra, 2006) has been employed as one of the many models of technology integration in education to clarify technological knowledge and skills, and teachers' need for training. Dong et

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al. (2019) collected data from K-12 teachers to examine factors that influenced technology integration. They concluded that teachers' knowledge and skills about technology could reduce the stress of using technology.

However, TPACK fails to demonstrate why teachers use technology distinctively (Kim et al., 2013, p. 75). Teacher beliefs fill the gap of explaining the difference in the integration of technology into education (Prestridge & de Aldama, 2016; Tondeur et al., 2017). Among all factors, teacher belief is recognized as one of the most critical factors that impact technology use (Cheng & Xie, 2018; Ertmer et al., 2012; Kim et al., 2013; Ottenbreit-Leftwich et al., 2010; O'Neal et al., 2017; Tondeur et al., 2008).

So far, the literature suggests that both external and internal factors can influence technology integration. Among all factors, teacher belief is a critical factor in technology integration.

In my next section, I will review literature regarding teacher belief.

**Teacher belief.** According to Pajares (1992), teacher belief is a messy construct without a unified definition. Rokeach (1986) conceptualize beliefs with an overarching model of individuals' belief systems, namely "each and every one of a person's countless beliefs about physical and social reality" (p. 2). Clark (1988) argues that teachers have a belief system pertinent to students' learning and materials based on teachers' responsibility, expertise, or control towards different phenomena. However, Pajares (1992) emphasizes that it is vital to recognize the connection among beliefs within a belief system rather than dichotomize the types of beliefs. Borg (2003) defines teacher beliefs as "what teachers know, believe and think." Park

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and Ertmer (2007) focus on the value of specific teaching methods or tools. Some researchers capitalize on disciplinary teaching practice (Charalambous, 2015; Dolphin & Tillotson, 2015). Others may delve into teachers' expectations of learners' achievement (Piker & Kimmel, 2018).

Notwithstanding the ambiguity of its conceptualization, teacher beliefs have been investigated to explore and explain teaching practices (Pajares, 1992). According to Richardson (1996), teacher beliefs "are thought to drive actions" (p. 108). Kagan (1992) indicates that teacher beliefs could influence teachers' decision-making, thereby impacting varied teaching practices. Moreover, Deal and White (2006) suggest that teacher beliefs define the nature of teaching practice.

To date, teacher beliefs have been studied with regard to challenges of instructing gifted students (e.g., Matheis et al., 2017), practices in kindergarten (e.g., Sverdlov & Aram, 2016), teacher education (e.g., Fleming et al., 2011), K-12 content areas (e.g., Charalambous, 2015) and language education (e.g., Farrell & Ives, 2015; Harrison & Lakin, 2018; Karamifar et al., 2019).

Moreover, research has confirmed the impact of teacher beliefs on technology use (e.g., Chaaban & Ellili-Cherif, 2017; Jones, 2017; Kriek & Coetzee, 2021). I will discuss teacher beliefs about technology integration in the next section.

**Teacher Belief about Technology Integration.** Teacher beliefs about technology integration has been defined in various ways. Teacher beliefs about technology use have been defined as the value of technology for teaching and learning (Polly et al., 2010), self-efficacy beliefs about technology application (Abbit, 2011), and the combination of both (Park & Ertmer, 2007). Kim et al. (2013) argue that beliefs about learning and teaching (i.e., pedagogical belief)

is decisive in choosing teaching content and methods. Miller et al. (2003) conclude an overarching framework for teacher beliefs about technology integration, including pedagogical beliefs (i.e., beliefs about teaching and learning with technology), self-efficacy beliefs (i.e., beliefs about individuals' capabilities to use technology), and value beliefs (i.e., beliefs about the relevance of technology to achieve teaching goals).

In the following sections, I will discuss pedagogical beliefs, self-efficacy beliefs and value beliefs respectively.

***Pedagogical Beliefs.*** Pedagogical beliefs denote the underlying understandings about teaching and learning that teachers verify (Tondeur et al., 2008). Teachers' pedagogical beliefs reflect the teachers' conceptions of effective teaching (Kim et al., 2013). According to Pajares (1992), pedagogical beliefs are "beliefs about their work, their students, their subject matter, and their roles and responsibilities" (p.134). The pedagogical belief indicates a mixed structure about pertinent beliefs regarding teaching and learning (Ertmer & Ottenbreit-Leftwich, 2010).

The pedagogical beliefs are akin to teacher-centered and student-centered approaches (Chan & Elliott, 2004), which are widely used in the field of technology integration (Kim et al., 2013; Deng et al., 2014; Tondeur et al., 2017). Teachers with traditional pedagogical beliefs are in line with teacher-centered practice (i.e., transmitting knowledge from teacher to students) characterized by the behaviorist tradition. In contrast, constructivist pedagogical beliefs are more student-centered (i.e., facilitate students to construct meaning) with the theoretical foundations of constructivism and social constructivism. Research shows that teachers possess different extents of both beliefs (Sang et al., 2009; Tondeur et al., 2008).

Teachers can screen the learning content and teaching method based on their pedagogical beliefs (Kagan, 1992). Traditional beliefs are typically related to behaviorism, whereby teachers act as experts to supervise the learning process (Deng et al., 2014). On the contrary, student-centered beliefs align with (social) constructivism, capitalizing on the learners' needs and interaction (Deng et al., 2014).

Traditional and constructivist pedagogical beliefs have been studied concerning technology integration in education. According to Ertmer (2005), the deployment of technology is influenced by teachers' pedagogical beliefs. Teachers with traditional beliefs use technology to support the teacher-centered instructions, whereas teachers with constructivist beliefs implement student-centered practice with technology (Overbay et al., 2012). Numerous studies have concluded that technology, as a teaching tool, can support teacher varied pedagogical beliefs (Chai, 2010; Deng et al., 2014; Peeraer & Van Petegem, 2011).

Teachers' pedagogical beliefs about technology integration in EFL education have been illustrated in numerous studies (Chai et al., 2013; Ding et al., 2019; Inayati & Emaliana, 2017; Liu et al., 2017; Van Praag & Sanchez, 2015;). Using the principle that beliefs and knowledge are closely intertwined (Pajares, 1992), Chai et al. (2013) investigated language teachers' pedagogical beliefs and their relationships with TPACK. They indicate that teachers' pedagogical beliefs are connected with their technological knowledge (Chai et al., 2013). Schmidt (2019) argues that pedagogical beliefs may enhance or impede language teachers' TPACK. Concerning the alignment of teacher beliefs and practice, Ding et al.'s (2019) argue that teachers' practice of technology is in alignment with teachers' pedagogical beliefs. When using identical tools,

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however, teachers would often use the technology differently to support their teaching practices based on their pedagogical beliefs.

Van Praag and Sanchez (2015) investigated barriers to technology integration by looking into teacher self-reported beliefs with their practice of mobile technology. They concluded that teachers' pedagogical beliefs could either impede or promote the integration of mobile technology. To shift teachers' negative beliefs, teacher trainers could aid teachers in recognizing the benefits of technology in promoting learners' outcomes.

***Self-Efficacy Beliefs.*** Bandura (1997) first attempt to conceptualize self-efficacy beliefs as individuals' judgment regarding their capabilities to achieve a goal of an expected level. In their research, Tschannen-Moran and Woolfold-Hoy (2001) conceptualize teacher's self-efficacy beliefs as "teacher's beliefs in his or her capability to organize and execute courses of action required to accomplish a specific teaching task in a particular context" (p. 233).

Previous research has demonstrated that teachers' self-efficacy beliefs intersect with teaching and learning in many ways. For example, teachers' self-efficacy beliefs can motivate teachers (Gibson & Dembo, 1984), teaching innovation and risk-taking (Fuchs et al., 2007), students' attitudes (Woolfolk & Hoy, 1990). Researchers assert that self-efficacy beliefs should be investigated by closely examining the specific classroom context (Bandura, 1986; Tschannen-Moran & Woolfold-Hoy, 2001).

Ertmer et al. (2003) define teachers' self-efficacy beliefs about the utilization of technology as their beliefs concerning the capabilities of using technology in teaching. Several attempts have been made to explore the sources of self-efficacy belief about technology

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integration, aligning with Bandura's conclusions (1977). Tilton and Hartnett (2016) argue that teachers' self-efficacy is supported by the frequency of use of technology and pertinent professional development. Their value beliefs and device affordances (e.g., multimedia, apps, and touchscreen) also enhance their self-efficacy. Birisci and Kul (2019) also examine the sources of self-efficacy beliefs about technology integration. They indicate teachers' high-level self-efficacy beliefs are concerning the *techopedagogical* education (i.e., adding technological factor to pedagogy in preservice teacher education) (Yurdakul, 2011), including teachers' successful experience with technology, hands-on engagement, and the availability and proliferation of technology.

It is critical to scrutinize teachers' self-efficacy beliefs concerning technology integration (Abbitt & Klett, 2007). Teachers' self-efficacy beliefs are correlated with their TPACK (Kul et al., 2019). Moreover, studies illustrate that teachers' self-efficacy beliefs can strongly predict their actual utilization of technology (Abbitt, 2011; Kwon et al., 2019; Teo et al., 2018). For example, teachers with firm self-efficacy beliefs about technology integration would promote teachers to be more motivated to use technology (Liu et al., 2017), resolve problems in teaching (Ertmer et al., 2006), and use technology more effectively (Enochs et al., 1993; Wang et al., 2004). Self-efficacy beliefs can influence the choice of incorporating technology in education (Wang et al., 2004). Self-efficacy beliefs can cause a refusion of using technology or create barriers to technology applications (Hew & Brush, 2007; Ertmer et al., 2012; Gbemu et al., 2020).

**Value Beliefs.** Value beliefs are part of complex belief systems (Rokeach, 1968). According

to Wigfield and Eccles (2000), value beliefs indicate individual perceived significance, achievement, and cost. Teacher beliefs about the perceived value of technology refer to the judgment of how well the technology could benefit teaching and learning (Anderson & Maninger, 2007; Watson, 2006). In other words, teachers would perceive what makes technology integration significant to them on an individual and pedagogical level (Becker, 2000).

Teachers' perceived value can influence teachers' academic choices and performance (Wigfield & Eccles, 2000). Before using the technology, teachers make value judgments (Zhao et al. 2002). More specifically, teachers who hold higher perceived values about adopting technology are more likely to use technology more frequently (Funkhouser & Mouza, 2013).

According to Miller et al. (2003), teachers' perceived value of technology predicts their use of technology. Teachers who value technology integration would be more likely to incorporate technology into their teaching (Buquoi et al., 2013). Moreover, high value beliefs may promote the integration of technology (Kimmons & Hall, 2016), whereas low value beliefs may hinder the adoption of technology (Howard, 2013).

Chaaban and Ellili-Cherif (2017) inquired into teachers' beliefs and their impact on technology integration in EFL classrooms. A survey was conducted to collect quantitative data from 263 EFL teachers in the Qatari Independent school. The findings demonstrated that teachers' high levels of value beliefs about technology were associated with their self-efficacy beliefs and their perceptions about obstacles in using technology. The researchers claimed that teachers' perceived value of technology could predict the extent of technology integration in the EFL classroom.

Thus far, I have discussed teachers' pedagogical, self-efficacy, and value beliefs as critical factors for technology integration. In my next section, I will review literature regarding lesson planning.

### ***Lesson Planning***

Previous research has demonstrated that lesson planning is critically significant for a successful practice (Hatch & Clark, 2021; Rusznyak & Walton, 2011). Lesson planning helps teachers think through teaching components, including teaching content, teaching methods, and assessment (Riddell, 2014; Ruys et al., 2012). Lesson planning builds connections among theory, curriculum, and teaching practice (Lee et al., 2009; Dunn et al., 2010). Given students' diverse needs and readiness, effective lesson planning is critical to address students' needs (Epp et al., 2015; Farrell, 2013). Alongside the internal reasons concerning teachers and teaching, school administrators can also evaluate and support teachers through the evidence of lesson plans (Hatch & Clark, 2021; Kagan & Tippins, 1992; Macutcheon, 1980). In the language teaching context, lesson planning offers teachers relevant guidance regarding the decision-making process (Chaves & Hernández, 2013). Well-developed lesson plans allow teachers to improve teaching efficiency, particularly for English language learners (Bartholomew et al., 2020).

Different scholars may have disparate definitions of lesson planning. Some scholars regard a lesson plan as a record (Farrell, 2002; Whitton et al., 2016). According to Farrell (2002), lesson planning is "a systematic record of a teacher's thoughts about what will be covered during a lesson" (p. 30) and serves as a record of student improvement. Other scholars identify vital components of lesson planning (Jamali & Heidari, 2014; Vdovina & Gaibisso, 2013). More

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specifically, a lesson plan provides direction for teachers in light of objectives, teaching materials, procedures, time, teaching context, and assessment (Jacobs et al., 2008; Jamali et al., 2014). Similarly, Freiberg and Driscoll (2000) analogize lesson planning as “the thread that weaves the curriculum, or the ‘what’ of teaching, with the instruction, or the ‘how’ of teaching” (p. 21). In EFL education, lesson planning indicates a teacher’s knowledge of language teaching and learning and their understanding of curriculum, students, and context (Li & Zou, 2017). According to Richards and Rodgers (2014), lesson planning for language teaching can be focused on form, focused on fluency, or a combination of both.

In history, scholars proposed different models for lesson planning. Tyler (1950) proposes a linear model of lesson planning, including learning objectives, activities, organization, and assessment. In 1970, researchers began to attend to lesson planning by comparing the lesson with teaching practice (Clark & Peterson, 1986). In other words, researchers were keen on examining teaching activities and teacher behaviors (e.g., Peterson et al., 1978; Yinger, 1979). However, according to Doyle and Holm (1988), Tyler’s model fails to address student needs, and, in their study, experienced teachers prefer more student-centered lesson planning. In agreement with Doyle and Holm (1988), Wiggins and McTighe (2006) develop the backward design to shift the focus from activities to student outcomes. From the 1980s, teachers began to shed light on learning objectives and student behaviors (e.g., Cain, 1989; Yinger & Clark, 1982; Zahorik, 1970). Since the late 19<sup>th</sup> century, lesson planning has been bound with the subject matter (Superfine, 2008).

In recent years, there has been a shift to technology integration in research concerning

lesson planning. Researchers suggest that teachers make decisions during lesson planning based on their knowledge of subject matter and pedagogical knowledge, known as PCK (i.e., pedagogical content knowledge) (Shulman, 1986; Stodolsky, 1988). Two decades ago, when ICT became the new trend in education (Aslam et al., 2021), Koehler and Mishra (2006) added technological knowledge to the PCK model, namely TPACK (i.e., technological, pedagogical, and content knowledge).

In my next section, I review the literature on planning for technology integration.

**Planning for Technology Integration.** Apart from TPACK model, scholars have developed alternative frameworks to inform lesson planning for technology integration. Puentedura (2006) demonstrates four degrees of technology integration through the SAMR framework (i.e., substitution, augmentation, modification, and redefinition). ADDIE (i.e., analyze, design, develop, implement, evaluate) model is a useful guideline for effective lesson planning (Davis, 2013). The technology integration Planning Cycle (TIPC) is a reflective planning cycle, which supports teachers in planning for technology use (Bergeson & Beschorner, 2021). Other models, such as BYOD (i.e., bring your own device) (Bradley et al., 2012), TIM (i.e., technology integration matrix) (Kozdras & Welsh, 2018), and TAM (i.e., teacher acceptance model) (Huang et al., 2016), are beneficial to teachers in terms of lesson planning regarding technology integration.

Since lesson planning is critical in technology integration (Branch & Merrill, 2012), a growing trend in research concerns planning for technology integration (e.g., Hutchison & Woodward, 2018; Kimmons et al., 2020; Thoma et al., 2017). For example, Appel et al. (2021)

investigated the design of an online EFL MOOC (i.e., massive open online courses) program. They integrated a tandem learning approach to enhance oral communication between learners. The results illustrated that the practical design of EFL MOOC relied on seven key components, namely, learning environment, facilitation dynamics, dyad configuration, task types, task topics, feedback provision, and gamification components.

However, limited research has been done about lesson planning for online teaching in K-12 education (Avgerinou & Pelonis, 2021). Fauzi and Khusuma (2020) conducted quantitative research on planning for online learning with 45 elementary school teacher participants. They found problems in teachers' planning for online learning. Specifically, teachers had difficulties in making materials due to time constraints. As a result, teachers assumed that online learning was not effective, in that the implementation of online learning was more demanding (e.g., using technology, parent collaboration, and internet access).

Boukhechba and Bouhania (2019) investigated the adaptation of lesson planning principles in the EFL E-learning environment. They conducted an experimental design with four middle school classes. The experimental group received lessons in line with ADDIE model of technology integration, whereas the control group received regular videos and media lessons. The findings demonstrated that the group with ADDIE model outperformed the other group in the post-test regarding language application. Specifically, a significant increase was found in the scores of ADDIE group, whereas the increase in scores of control group was not significant.

Larasati et al. (2021) investigated how teachers planned their lessons on the Google Classroom online platform. They adopted lesson planning guidelines from Bin-Hady and

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Abdulsafi (2019). Specifically, they adjusted the guideline with five aspects, namely learning objectives, materials, activities, media and resources, and assessment. Based on the guideline, they conducted a qualitative case study with an EFL teacher through the analysis of four lesson plans for online learning. They concluded that teachers could successfully develop their lesson plans for online teaching when following their guidelines.

After discussing lesson planning for technology integration, I will now summarize this chapter and identify the research gap for my thesis.

### ***Summary of Literature Review***

In this chapter, I reviewed literature regarding technology integration, factors affecting technology integration, and lesson planning, serving the purpose of this research. This literature review offered a broad context for current study regarding how teacher beliefs influence lesson planning for VSCMC instructions. Many endeavors have been made to research about technology integration, such as the benefits, issues and varied tools. The development of computers contributes to the application of CALL. Among all forms of CALL, VSCMC is a popular tool in language education. However, VSCMC with young learners has been inadequately researched.

Many factors can affect technology integration. The external factors (e.g., resources, training, and policy) cannot solely affect technology integration. Internal factors (e.g., knowledge, skills, and beliefs) are also significant factors. Among all internal factors affecting technology integration, teacher beliefs offer insights into explanations for different practices of technology uses. Specifically, technology integration can be influenced by pedagogical beliefs,

self-efficacy beliefs, and value beliefs.

Lesson planning plays an important role in teaching, such as connecting theory with practice, addressing students' needs and facilitating teachers' thinking. From a historical perspective, research about lesson planning has shifted from teacher-centered practice to student-centered practice. In recent 20 years, technology advances promote the research regarding lesson planning for technology.

Albeit the significant role of teacher beliefs for technology integration, limited research can be found pertaining to the influence of teacher belief about VSCMC with young learners on lesson planning. The only study that I could find from my literature review regarding teacher beliefs and VSCMC with young EFL learners was Yu's (2018) study. Yu (2018) conducted a qualitative study to explore native English-speaking teachers' perspectives about VSCMC with elementary school students. Results in the research were three-fold: disparity in student performances because of their diverse English levels, attitudes and personalities, teachers' lack of efficacy in teaching online, and inappropriateness of online activity design. However, this study did not define teacher perspectives, nor did the research discuss the impact of teacher perspectives.

Simultaneously, the research above was all conducted in the public school system. Given the rapid growth of EFL online commercial schools in China, it is necessary and urgent to investigate Chinese teacher beliefs about VSCMC with young learners and their impacts on lesson planning. As my review shows, no study has focused on teachers' beliefs about VSCMC with young EFL learners in commercial schools. Moreover, the literature review demonstrates

that teachers with divergent established beliefs may make different decisions about lesson planning for technology integration. To fill the gap, my study aims to contribute to our collective understanding of the emerging phenomenon of VSCMC instructions by exploring the impact of EFL teachers' beliefs on lesson planning.

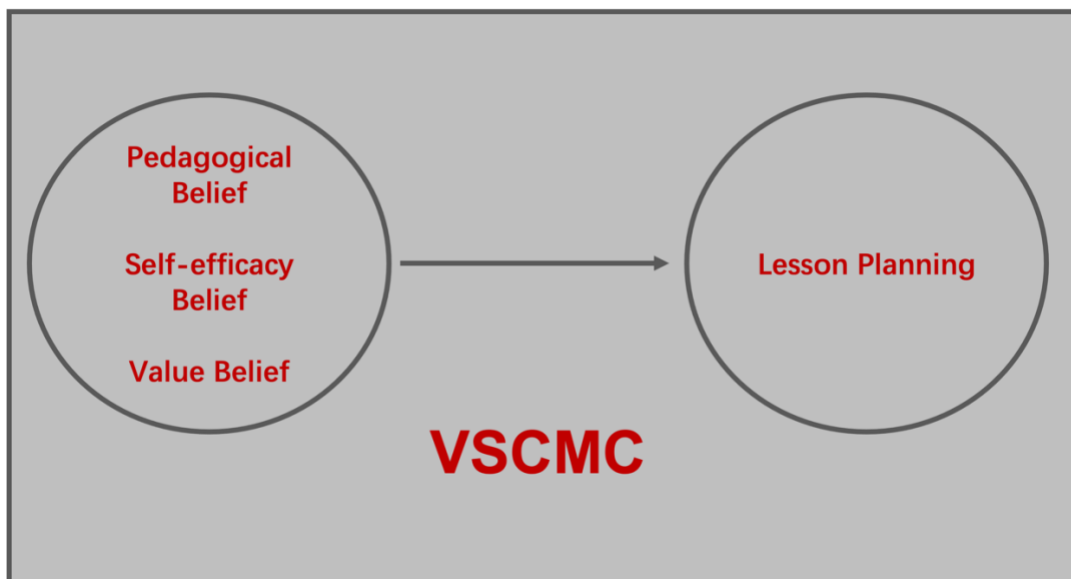
Based on the above literature review, I will discuss the pertinent concepts and notions for my study and organizes them into my conceptual framework.

### **Conceptual Framework**

Five key concepts emerge from reviewing the literature, namely VSCMC, teacher belief (i.e., pedagogical belief, self-efficacy belief, and value belief), and lesson planning, providing the foundation for the research question guiding this study. Figure 1 illustrates the conceptual framework that guides the study in the context of VSCMC. I will define each concept for my conceptual framework.

### **Figure 1**

#### *Conceptual Framework*



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## ***VSCMC***

In my study, the definition of VSCMC aligns with previous work (Stockwell, 2010; Chun, 2016; Hung & Higgins, 2016), namely the web-based, real-time communication with audio and video mode.

## ***Lesson Planning***

In the current study, lesson planning refers to the act of EFL teachers preparing what will be covered in their VSCMC lessons and how their lessons will be delivered (Farrell, 2002; Jacobs et al., 2008; Jamali et al., 2014).

## ***Teacher Beliefs***

I here define teacher beliefs in line with the literature I have reviewed. As discussed above, teacher belief has three critical components, namely pedagogical belief, self-efficacy belief, and value belief. Based on the existing research, pedagogical beliefs, self-efficacy beliefs, and value beliefs are interwoven (Bebell & Kay, 2010; Miranda & Russell 2012), acting as primary predictors of different technological teaching practices (Kim et al., 2013; Lee & Tsai, 2010; Ottenbreit-Leftwich et al., 2010; Tondeur et al., 2017). Research has illustrated teacher self-efficacy (e.g., Mei et al., 2018), beliefs about the value of using technology (e.g., Anderson et al., 2011; Korucu-Kis & Ozmen, 2019; Lai & Lin, 2018; Leem & Sung. 2019), and pedagogical beliefs (e.g., Ding et al., 2019; Liu et al., 2017; Park & Ertmer, 2007) are the most influential factors in technology integration (Miller et al., 2003). Recent research has employed the three beliefs to investigate teacher beliefs regarding technology use (e.g., Anderson & Putman, 2020; Hsu, 2013; Hsu, 2015; Park & Ertmer, 2007; Taimalu & Luik, 2019). For example, Anderson and

Putman (2020) examined teachers' pedagogical, efficacy and value beliefs about technology integration in elementary special education. Taimalu and Luik (2019) explored the impact of teachers' pedagogical, efficacy, and value beliefs on their technology use. As such, I will adopt Miller et al.'s (2003) definition of teacher beliefs in the current research.

**Pedagogical Belief.** In the current study, pedagogical belief is defined as EFL teachers' perceived effective teaching regarding young learners in VSCMC contexts (Miller et al.'s, 2003).

**Self-efficacy Belief.** In the current study, self-efficacy belief is defined as teachers' perceived capabilities of using VSCMC tools to teach young EFL students (Miller et al.'s, 2003).

**Value Belief.** In the current study, value belief is defined as teachers' perceived value about VSCMC for EFL young learners (Miller et al.'s, 2003).

The conceptual framework of this study serves best for understanding teachers' belief systems towards VSCMC, their lesson planning processes, and the impact of the beliefs on lesson planning. Based on the conceptual framework, I will develop the following research question:

### **Research Question**

How do EFL teachers' pedagogical beliefs, self-efficacy beliefs, and value beliefs about VSCMC influence their lesson planning?

To address the research question, I will discuss the research methodology, data collection, and data analysis in the next chapter.

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### **Chapter 3: Methodology**

This chapter discusses the research design, data collection, and analysis in order to explore the impact of teacher beliefs towards VSCMC instructions with young EFL learners on their lesson planning. For the purposes of this study, young EFL learners are defined as children at 5-12 years old. First, I will justify the choice of a multiple-case study. Next, I will present the sampling protocols and participants' demographics. Following that, I will describe the methods of data collection and data analysis. Subsequently, I will discuss the current study's trustworthiness (e.g., member check and interrater reliability). Finally, I will discuss the ethical considerations followed throughout the study.

#### **Qualitative Multiple-Case Study**

Qualitative research serves the purpose of this research. The qualitative research approach allows me to "understand the social phenomenon from the perspective of those involved, to contextualize issues..." (Glesne, 2006, p.4). Researchers employ a qualitative method to understand the realities through examining participants' experiences (Stake, 2013). Qualitative methods are appropriate for exploring subjectivity and descriptions of a process (Creswell, 2014). For example, researchers can obtain an in-depth understanding of participants' beliefs and decisions (Rosenthal, 2016). In my study, I explore teacher beliefs and their impacts on lesson planning processes.

This research employs qualitative multiple-case study methodology. There are three types of case study, namely single instrumental case studies, multiple case studies, and intrinsic case studies (Creswell, 2014). The single instrumental case study focuses on one issue or problem

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within one bounded case, whereas the intrinsic case study concentrates on the case itself, such as the program evaluation. In contrast, the multiple case study draws insights from multiple sites or programs to investigate the same issue or problem.

A multiple-case study involves the study of cases within a real-life context (Creswell, 2014), which "illuminate a decision or set of decisions: why they were taken..." (Schramm, 1971, p.6). For my purposes, I have used how Miles and Huberman (2014) have defined cases as phenomena "in a bounded context" (p.28) and taken into account how individuals, organizations, processes, programs, or events can also be considered cases (Yin, 2009). Accordingly, in this study, a multiple case study was conducted with each teacher being a case. Each teacher needs to be a case because their decisions are particular to their classroom settings, beliefs, and lesson planning processes.

According to Yin (2017), a case study design allows researchers to answer how and why questions and take relevant contextual conditions into account when exploring decisions, namely, teachers' decision-making affected by their beliefs in my study. The multiple-case study supports the understanding of multiple bounded systems (Creswell, 2014), which, in the current study, were different teachers in different working sites. Accordingly, I have built a holistic understanding of teacher beliefs and their impacts on lesson planning through analyzing the cases separately and collectively (Creswell, 2014).

In summary, a qualitative multi-case study approach was appropriate in the current research to answer my how question in an in-depth manner. The multi-case study research allowed me to reveal the collective decisions during lesson planning shared by the teachers.

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Given the choice of research methodology, I will discuss the case selection procedures next.

### **Case Selection Procedures**

To answer my research question, I adopted purposeful sampling in this study (Creswell, 2014). In other words, I chose samples from whom I could gain the most insights for my research. The current research aimed to explore how Chinese EFL teachers' beliefs impacted their lesson planning for VSCMC instructions with young learners. Accordingly, I decided on the following conditions while sampling: 1) Chinese EFL teachers, 2) teaching 5-12-year-old students, 3) teaching in VSCMC contexts for more than three years. According to Basturkmen (2012), the experienced teachers' beliefs are more reliable in their practices. Therefore, the participants were assumed to be explicitly aware of what they believed in.

Since the choice of appropriate cases is a challenging task (Gerring, 2007), I made deliberate choices based on two objectives (Seawright & Gerring, 2008): (1) all samples should be representative; (2) samples should be varied concerning research interests. Therefore, I chose the participants who were most similar and most different. Particularly, all participants met the criteria I mentioned above. Meanwhile, each of them had different characteristics. Specifically, I recruited participants who had different educational backgrounds (e.g., education major and non-education major). The participants had taught different ages of students (e.g., 5-8, 8-10) and varied numbers of groups (e.g., one-on-one, one-on-small group, one-on-large group). The teachers had worked in different school settings (e.g., large schools, medium schools, and small schools).

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All potential participants were approached through instant messages on WeChat (i.e., an instant messenger used frequently among Chinese people) and then recruited through emails. After sending ten potential participants instant messages, eight teachers replied. After explaining my research, they expressed their interests in participation. Then, I sent them a formal recruitment email (see Appendix A) with a detailed research account, including information pertinent to the research design and the accountability of the participants.

In line with my criteria, I recruited six participants from commercial schools in Beijing for this study. Presently, many of the online commercial schools are located in Beijing due to the rich educational resources. Besides, I worked as an online EFL teacher in Beijing, where I had many connections with EFL teachers in different schools. As such, it was legitimate to choose participants in commercial schools in Beijing.

In current study, the number of participants were also appropriate. According to Stake (2013), multiple case studies are congruent with multiple realities in that dichotomous views of the phenomenon are preserved. Since qualitative research entails a more in-depth investigation (Creswell, 2014), a limited number of participants allows me to acquire a holistic understanding (Seidman, 2006). As such, I could draw insights from multiple participants as well as conduct an in-depth analysis for each case.

The participant demographics can be found below (See Table 1). I decided to offer a brief description of each participant in the methodology chapter, which I assumed would be necessary for the reader's understanding of the research findings. Specifically, the demographic information contextualized their reported beliefs and decisions regarding lesson planning.

The participants were all Chinese EFL teachers. Two were male, and four were female from distinct schools. They had taught English to young children for over six years, including at least three years of teaching in VSCMC contexts. Besides, each participant had different educational backgrounds and held different teaching certificates. These teachers were using different teaching tools, namely teaching in different contexts. Besides, they taught different age groups and numbers of students, contributing to a more extensive view towards VSCMC. All participants self-selected their pseudonyms to maintain confidentiality. Moreover, I decided against reporting other demographic details (e.g., social class, sexual orientation, race, ethnicity, first language, and nationality) due to their irrelevancy to the current study.

**Table 1**

*Participant demographics*

Pseudonym	Gender	Degrees/ Certificate	Total years of Teaching Experience	Years in VSCMC Teaching	Student s' age	Number of students in a class
Lynn	Female	Bachelor of Education	15	6	5-12	4-6
ChrisLeeson	Male	Master (Non- education); TESOL certificate	6	4	5-7	4
Yinko	Female	Bachelor (Non- education); Chinese Teacher's Qualification Certificate; TKT (Teaching Knowledge Test) Certificate; TESOL Certificate	11	6	5-7	4
Andy	Male	Teacher College; Teacher's Qualification	13	4	7-9	1

		Certificate; TKT (Teaching Knowledge Test) Certificate				
Ariel	Female	Master of Second Language Education	8	6	7-9	4
Brandie	Female	Bachelor (Non- education); Teacher's Qualification Certificate; TKT (Teaching Knowledge Test) Certificate	11	3	8-12	11

Based on the rigorous case selection procedures, six Chinese EFL teachers, who had more than three years of VSCMC teaching with young learners, participated in the study. In line with their self-reported information, they were of different genders, education backgrounds, and years of teaching experience. They taught different ages of students and class sizes, making them the ideal teacher candidates for this study to investigate how those variables interplay with their reported beliefs and lesson planning.

Next, I will present the school context for each participant.

### **Context**

Since teacher beliefs are closely related to contexts and experiences (Negueruela-Azarola, 2011), it is significant to explore beliefs through contextualizing the participant's beliefs and practices (Cross, 2009). Besides, multiple realities, constructed historically and socially (Denzin & Lincoln, 2011; Vygotsky, 1978), exist simultaneously due to distinct interpretations (Merriam, 2009). As such, Creswell (2014) suggests that the analysis of each case should present a thorough description of the context and the case.

Given the significance of the context, I decided to describe the participants' schools in the methodology chapter. The account of the context aimed to reveal the uniqueness of lived experiences, thereby picturing the impact of teacher beliefs on lesson planning. As such, readers could build a better understanding of participants' beliefs and decisions regarding lesson planning. I will begin with Lynn's school.

### ***Lynn's School***

Lynn's school offered online EFL classes for K-Grade 3 students from different cities in China. Her school valued parents' needs and expectations. Accordingly, her school preferred activities that could induce more oral output, meeting parents' needs. While designing curriculum, her school considered the needs of the majority of students, such as cognitive development and English levels. In her school, the curriculum developers, who were experienced teachers from face-to-face EFL schools, were responsible for writing objectives and choosing materials and methods. Their jobs were to revert face-to-face school teaching activities into online activities. Teachers did not have too much flexibility in revising the curriculum but making some adjustments. The school grouped 4 to 6 students in a class based on the placement test results. All students attended 30- to 40-minute classes twice a week.

### ***ChrisLeeson's School***

ChrisLeeson's school offered online classes for 4-12-year-old students from different cities in China. His school aimed to promote children's communicative skills as well as their testing proficiencies. In alignment with this goal, the school developed the curriculum based on English Curriculum Standard in China and Common European Framework Reference (CEFR). His

school had a three-fixed policy, namely fixed teacher, fixed group, and fixed time. In other words, each student would learn in the same group of 4 to 6 students with the same teacher at the same time each week. To improve teaching quality, curriculum developers at this school designed standardized teaching courseware and lesson plans. Meanwhile, teachers needed to read through lesson plans before teaching and teach based on standardized and scripted lesson plans. In his school, teachers were not supposed to change learning objectives and teaching procedures. Prior to the enrollment, students were grouped based on the placement test. High-level students were allocated to one-on-one or two classes. The other students were grouped into one-on-four to six classes. Students had 25-minute classes twice a week.

### ***Yinko's School***

The school Yinko worked at recognized itself as the global leader of EFL education. It had thousands of teachers who delivered one-on-one classes to 5-12-year-old students from all over China. Along with the one-on-one classes, the school decided to start a new program to explore one-on-small online group classes with the use of English readers. Specifically, the new program focused on improving oral communication through reading. Yinko was assigned to the new program to plan and deliver lessons. To achieve a successful startup, this new program recruited high-level students, aged from five to ten years old, based on a placement test. Each student participated in 40-minute classes twice a week.

### ***Andy's School***

Andy's school had many branches in Beijing, China. Each branch had face-to-face programs. To cater to the popularity of online learning, his school started a new one-on-one online learning

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program, which primarily focused on oral fluency. Andy was assigned for teaching in this program. Specifically, Andy was responsible for developing the curriculum and delivering lessons. To experiment their online curriculum, the school began to recruit students for their online program from their face-to-face program. All students were primary school students (i.e., above six years old) in Beijing. The students had one 50-minute online class per week.

### ***Ariel's School***

Ariel's school focused on reading skills and strategies as well as language competencies. In her school, teachers needed to plan their lessons before teaching. Teachers conducted 50-minute classes with the same group of four students twice a week. Her students were primarily primary school students (i.e., above six years old). When grouping students, her school primarily considered students' English levels. As a result, the students' ages in each class were different.

### ***Brandie's School***

Brandie's school, affiliated with a Chinese university, had more than hundred branches in China. Her school focused on learning interests and testing skills through the implementation of a standardized curriculum, which was developed by a team of curriculum designers. A teacher's job was to learn about what objectives they should achieve and what teaching they should adopt to achieve the goal. Besides this, teachers were required to follow the curriculum and, if necessary, made minor adjustments. The school grouped students based on a placement test regarding their English levels. Thus, her school primarily considered these criteria when placing the students in different classes. As such, that would lead to slight age differences. Most of the students were upper-level primary school students (i.e., above eight years old) from the same

city. Brandie taught the students once a week for two hours. Each group consists of 8-10 students with high-level English proficiency.

After presenting the contexts for all participants, I will discuss how I collected the data.

### **Data Collection**

The interview is a critical data source in case studies (Yin, 2017). We cannot acquire individuals' thoughts by directly observing but by asking questions (Patton, 2002). Besides, I planned to observe classes because multiple case studies entail multiple sources of data collection (Creswell, 2014). Due to the breakout of Covid-19, however, it was not realistic to connect with people in different time zones. Therefore, I chose the interview as my primary method of collecting teacher beliefs.

The approach to teacher beliefs was conducting a semi-structured interview with individual teachers. Semi-structured interviews are guided by interview guidelines without specified questions in a specific sequence (Creswell, 2014). Conducting semi-structured interviews was conducive to the development of contingent issues within the course of an interview. The semi-structured interview also allowed the participants to discuss their beliefs and experiences in lesson planning openly. That said, I carefully asked supplementary questions based on their responses to further elaborate on their lived experiences. As such, the research could delve into a holistic understanding of teacher beliefs with in-depth responses.

Albeit that the interview process was flexible, an interview guide was designed in line with the conceptual framework vigorously to collect exceptionally descriptive accounts. The interview guide (see Appendix B) covered questions concerning the research question. The

interview had several different sections. Before the interview, the interview protocol was reviewed by the thesis committee. The committee members suggested that the interview questions should align with the research questions more straightforwardly. I revised the questions based on the committee's suggestions, thereby helping the participants reflect on their beliefs about EFL VSCMC instructions.

The one-on-one interview was conducted by telephone. Due to the pandemic, it would not be realistic for me to travel back to China. Hence, a telephone interview was more achievable. Besides, each individual held divergent beliefs about VSCMC teaching. The one-on-one interview could contextualize and specify the data collection. The interview was conducted conversationally to obtain informative data. I interviewed the participants in Mandarin, which allowed them to fully express themselves in an articulate and comfortable manner (Creswell, 2014).

I conducted two rounds of interviews with each participant. According to Seidman (2006), researchers conducted three rounds of interviews in that participants discussed their experiences, explicit their experience in the context, and reflected on their experience. I adjusted the three rounds of the interview into two rounds due to the participants' schedules. Specifically, participants were asked to describe their school contexts, teaching platforms, lesson planning experiences, and pedagogical beliefs in the first round of interview. Next, the participants were asked about their self-efficacy beliefs, value beliefs, and their reflections on the impact of their beliefs on lesson planning. As such, I could collect adequate data for my research regarding participants' contexts, beliefs, lesson planning experiences, and reflections. The interviews were

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recorded and transcribed as descriptive data for qualitative analysis. After each interview, I wrote my reactions immediately in the memo when my memory was still fresh. Each interview took up approximately 45 minutes to 1 hour.

This first interview aimed to learn about their teaching experience, lesson planning, and pedagogical beliefs. Specifically, I began by introducing the research and restating the ethical protocols used in the study. Then, the participants shared their prior experience as EFL teachers. Following this, the participants thought aloud about how they planned their lesson for VSCMC teaching. Finally, the participants reflected on their pedagogical beliefs.

The second interview questions were specific to their perceived capabilities and values of VSCMC teaching and how their beliefs influenced their lesson planning. First, they reflected on how well they could teach in VSCMC settings. Next, they reflected on the values of VSCMC teaching. Last, they discussed the influence of their beliefs on lesson planning.

Next, I will present how data was analyzed in this study.

### **Data Analysis**

This section discusses the methods of data analysis. Miles and Hubbert (2014) suggest that data analysis begins with data collection. Accordingly, data were analyzed during and after data collection in the Spring and Summer of 2021. According to Yin (2017), a multiple case study might first analyze every case separately, followed by analyzing cross cases collectively. As I detailed below, to answer my research question, I conducted a within-case analysis (Miles et al., 2014), in which each participant's beliefs were presented. Following this, I compared and contrasted the cases in the cross-case analysis (Miles et al., 2014).

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### ***Transcription and Translation***

I began with transcribing the audio-recorded data. Then I translated the Mandarin scripts into English. The researchers should transcribe data through “the process of converting audiotape recordings...into text data” (Creswell, 2014, p.239). Transcription offers rich data for data analysis and allows researchers to cite verbatim (Merriam, 2009). After each interview, I transcribed and translated the interviews by hand. On average, it took me around eight hours to transcribe and translate each interview. Although it was an enduring effort, this process made me more familiar with the data. During this process, I took notes and wrote my reactions, which helped me analyze the data. I asked a thesis-based graduate student at the University of Ottawa to do a member check with the translation and transcription. After member check, I uploaded the raw data to NVivo to conduct the within-case and cross-case analyses. I will discuss member checks and interrater reliability in the trustworthiness session below.

### ***Within-Case Analysis***

After transcribing and translating the data, I conducted the within-case analysis. In other words, I inspected each case individually. According to Stake (2013), the individual case should be analyzed within its unique context.

To begin with, I developed a start list to explore the data. The list of codes came from "the conceptual framework, list of research questions...that the researcher brings to the study" (Miles et al., 2014, p.86). The start list included codes addressing lesson planning, pedagogical beliefs, self-efficacy beliefs, value beliefs, and VSCMC. Table 2 below demonstrates the start list.

**Table 2***Start list for Within-Case Analysis*

Name	Description
Lesson Planning	The account of how the teacher plans to deliver their lesson. It has six subthemes: Learning objectives, materials, students, teaching methods, assessment, and technology.
Assessment	Teachers' accounts of their means of assessing students learning outcomes in the VSCMC context.
Learning Objectives	Teachers make decisions about the choice of learning objectives for a VSCMC class.
Materials	Teachers make decisions about teaching materials, including but not restricted to textbooks, realia, multimedia, in a VSCMC context.
Students	Teachers' understanding of their students' characteristics in a VSCMC context.
Teaching Method	Teachers make the decision about the choice of teaching method in a VSCMC context.
Technology Tools	Teachers' plan of the use of technology in their VSCMC teaching.
Pedagogical Belief	The best way of teaching approaches and methods that teachers perceive in a VSCMC context.
Student-centered	The best teaching approaches and methods that teachers perceive in the VSCMC context attend to the various learning needs, preferences, and individualities.
Teacher-Centered	The best way of teaching approaches and methods that teachers perceive in the VSCMC context indicate that teacher plays a dominant and authoritative role as a lecturer and students are passive listeners and work individually.
Self-Efficacy Belief	Teachers' perception of how well they could teach in a VSCMC context.
Moderate	Teachers have a moderate efficacy of teaching in a VSCMC context.
Strong	Teachers have a strong efficacy in teaching in a VSCMC context.
Weak	Teachers have a weak efficacy in teaching in a VSCMC context.
Value Belief	Teachers' perception of the value of VSCMC teaching for young EFL learners.
Negative	Teachers hold a negative belief about teaching young EFL learners in a VSCMC context.
Positive	Teachers hold a positive belief about teaching young EFL learners in a VSCMC context.
VSCMC	Descriptions and accounts of video-based synchronous computer-mediated communications.

I applied the start list in the first case through line-by-line coding. I followed Creswell's

(2014) steps. Specifically, I first went through the text data. Next, I divided this data into different segments in NVivo and labeled the segments with either the codes in the start list or emerging codes. Figure 2 shows an example of how codes emerge. Table 3 shows some examples of emerging codes. Based on the codes from line-by-line coding, I began to develop the codebook. A codebook, namely a set of codes, definitions, and examples, is critical in qualitative research (Miles et al., 2014). Since the number of codes were more than 100, I thought not all codes were meaningful for this research. I reviewed the codes and merged the less frequent ones into the other codes. For example, I merged several codes, such as student characteristics, English levels, and age, into the code influential factors for lesson planning. Meanwhile, I also reviewed the transcripts under each code to determine the appropriateness of the code. The transcripts, which were consistent under the defined the code, served as examples for future coding.

## Figure 2

### *Examples of Coding*

The screenshot displays the NVivo interface. On the left, a text transcript is shown with several lines highlighted in yellow. The transcript is attributed to 'LYNN:' and contains a paragraph discussing class scale and teaching approaches. On the right side, a vertical list of codes is visible, each with a colored bar indicating its application to the text. The codes include: Technology Tools, Experience with technology, Strong, Assessment, Comparison, Value Effect, Student-centered, Teacher-Centered, Content and Materials, young learners, Curriculum development, becoming, job in commercial school, Online teaching, Student info adjustment, Prediction, Pedagogical Effect, EFL Education in China goals, Constraints, Teaching Method, English Learning Positive, Decisions by Parents, VCSMC, and Negotiation. A timestamp '{30:35-33:09}' is visible at the bottom left of the transcript area.

**Table 3***Examples of Emerging codes*

Code	Description
adjustment	The teacher makes adjustments based on the curriculum developed by the curriculum designer.
advancement	The development of technology has a positive effect on education
becoming	The evolvement of a person or the field of EFL education.
Blended learning	The integration of both VSCMC and other means of teaching.
Commercial school	The description of the school that offers English courses to young EFL learners.
Curriculum development	curriculum development (e.g., choice of learning objectives, materials, and activities) in a commercial school
frequency	It indicates how many times the students would have VSCMC classes.
Group students	After recruiting the students, the school will group the students into different classes.

After drafting the codebook, I tested the codebook with a new set of data to revise the codebook (see Table 4). After applying the codebook to a small subset of data, the codebook should be reviewed to enhance coding reliability (Robert, et al., 2019). While testing the codebook, I stayed open for new codes that emerged from the data. I noticed that most of the codes worked in the new set of data. However, some definitions needed to be revised. For example, EFL education in China had been defined as EFL education in Chinese commercial schools. When examining the new data, I found descriptions of EFL education in general, which was not restricted to Chinese commercial schools. Thus, I revised the definition of the code so that it could serve a wider range of data. Next, I asked a thesis-based graduate student to use the codebook to code the data in order to maintain the reliability of my research. I will present it in the trustworthiness section. After that, I used the codebook to code the rest of the data. I followed the conceptual framework to represent the details of the case in my findings chapter.

**Table 4***Examples of the Code Book*

Code	Description	Example
adjustment	The teacher makes adjustments based on the curriculum developed by the curriculum designer.	I think I also need to expand the topics and offer them more opportunities to present themselves... I would, for example, assign students a task, like drawing a picture or writing a short passage, in the end of each class. Then I will invite them to present their work in the introduction session of the following class. This is a very effective way of inducing their learned knowledge.
becoming	The evolvement of a person or the field of EFL education.	First, it is a novel way of teaching that I have never done before. I would like to try new things.
Commercial school	The description of the school that offers English courses to young EFL learners.	I think there are so many commercial schools. It is very hard to make choices. I think the competition is fierce.

***Cross-Case Analysis***

The cross-case analysis is to build an in-depth understanding of the phenomenon (Miles et al., 2014). The cross-case analysis examines the similarities and differences among all the cases to strengthen the research (Miles et al., 2014). This research was to understand VSCMC teaching through exploring teacher beliefs. Therefore, I presented their shared beliefs about VSCMC and the discrepancies, thereby building a better understanding of the impact of teacher beliefs on planning for VSCMC. By doing so, I respected the multiple realities situated in divergent social contexts.

When looking for patterns in lesson planning, for example, I noticed themes, such as learning objectives, content and material, and teaching methods. Meanwhile, each participants explained what decisions they made and why they made such decisions. Therefore, I used a matrix to showcase the data to describe each theme (see Table 5).

**Table 5***Examples of Cross-Case Analysis*

Learning Objectives	What	Why
Lynn	<ul style="list-style-type: none"> <li>-I would learn about pre-developed objectives written by the curriculum designers.</li> <li>-Objectives are primarily lower-order thinking skills.</li> <li>-The breakdown of objectives is more detailed</li> <li>-I would add more objectives for fast learners</li> <li>-I would recap learning objectives that are not achieved in previous lessons</li> </ul>	<ul style="list-style-type: none"> <li>-Objectives are congruent with students' learning outcomes and parents' expectations</li> <li>-Teachers cannot delete and change learning objectives.</li> <li>-Objectives concerning leadership and higher-order thinking skills are difficult to be achieved.</li> <li>-VSCMC is less efficient, so it needs more time to achieve the same objective as in a face-to-face class.</li> <li>-Objectives should be in line with students' levels.</li> </ul>
Chris Leeson	<ul style="list-style-type: none"> <li>-Objectives are primarily listening and speaking at the elementary level.</li> <li>-Each unit will include word recognition (5 words per unit) and phonics.</li> <li>-writing objectives for students that are older than 7 years old.</li> </ul>	<ul style="list-style-type: none"> <li>-I would refer to both English Standard in China and CEFR.</li> <li>-The number of vocabularies for each class depends on children's cognitive development and parents' expectation.</li> </ul>
Yinko	<ul style="list-style-type: none"> <li>-Based on preset syllabus and curriculum from the school</li> <li>-Integrating of speaking and listening into reading instructions</li> </ul>	<ul style="list-style-type: none"> <li>-Teachers follow fixed curriculum designed by the school</li> <li>-those skills depend on visual and audio features</li> <li>-readers offer authentic context for speaking and listening</li> </ul>
Andy	<ul style="list-style-type: none"> <li>-I aim to promote independent learning.</li> <li>-I would choose key vocabulary and sentence structures based on the high-order questions at the back of the readers.</li> </ul>	<ul style="list-style-type: none"> <li>-I could help students become independent learners.</li> <li>-Parents would easily check and understand what students learn.</li> </ul>
Ariel	<ul style="list-style-type: none"> <li>-I focus on reading and writing skills and strategies based on Common Core State Standard developed by the US.</li> </ul>	<ul style="list-style-type: none"> <li>-Writing should not be overemphasized when the students are too young.</li> <li>-Teachers should teach pertinent reading and writing skills and strategies.</li> <li>-The purpose is not only for language learning but serves higher purposes of attaining knowledge and information.</li> </ul>

Brandie	<p>-I would learn about the learning objectives developed by the school writers.</p> <p>-I would focus on interests and language exposure for younger students</p> <p>-I would focus on knowledge and skills for older students</p> <p>-I would focus on grammar and vocabulary embedded in reading instructions.</p> <p>-I would focus on students' oral output.</p>	<p>-Curriculum developers of the school developed a curriculum based on students' interests, cognition, and needs.</p>
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### *Memo writing*

During the process of data analysis, I began to write analytical memos about merging codes and my reflections. According to Miles et al. (2014), "[a]n analytic memo is a brief or extended narrative that documents the researcher's reflections and thinking processes about the data" (p.97). Personally, I benefited from memo writing in that I could respond to data and record the emergence of themes. To write the memo, I followed Miles et al.'s (2014) guidance, including a date, a title and a subtitle. The following Figure 2 demonstrates my sample memo:

### **Figure 2**

#### *Memo: Research Method: Start list, Line-by-Line Coding, and Questions*

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##### **Research Method**

###### **Start List**

Based on the literature and conceptual framework, I developed my start list (e.g., pedagogical beliefs, value beliefs, and self-efficacy beliefs).

###### **Line by line coding**

For my first participant, I use line by line coding because I want to be attentive to the details. I will stay open to the emerging codes. After the first cycle coding, I will develop my code book. Then, I will apply it to other cases. Meanwhile, I will also be open to revise and refine my code book as the data analysis proceeds.

###### **Question:**

When I was doing line by line coding, I found many codes were not relevant in my research. But I decided to leave them there. I wanted to stay open, so I could develop a code book.

In summary, I conducted within-case analysis and cross-case analysis to answer my research question. Within-case analysis, guided by the conceptual framework, focused on reporting findings of the individual participant straightforwardly. Meanwhile, cross-case analysis compared and contrasted the data among the participants regarding answering the research question. I kept writing a memo to assist my analysis throughout the data analysis process and keep me focused.

I will discuss trustworthiness and ethical considerations in the next two sections.

### **Trustworthiness**

I have employed multiple validation strategies in the current research, suggested by Creswell and Poth (2016). Validity is conceptualized as “the ‘accuracy’ of the findings, as best described by the researcher, the participants, and the readers (or reviewers)” (Creswell & Poth, 2016, p.338). First, member checking was used to validate the research (Creswell, 2014). After transcribing data, I sent the transcripts back to the participants for feedback. As such, the accuracy was improved.

Another validation method is to generate detailed descriptions so that the readers can decide the transferability of the findings (Creswell, 2014). In the current research, I described the teachers' experience and school contexts. Besides, large amounts of verbatims were quoted in the findings.

Moreover, interrater reliability is established in this research. I asked another graduate student from the University of Ottawa to transcribe and translate 5% of the data set. After comparing our work in a meeting, we reached 80% of the agreement regarding transcription and

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translation. Three professors in the research committee will facilitate the audit of the research.

Finally, clarifying the researcher's bias is also a validation method (Creswell & Poth, 2016) I employed. At the beginning of my thesis, I reflected on my former VSCMC experience, which, on the other hand, could be my research motivation and help build rapport with the participants. Therefore, I could collect valid data.

Reliability indicates that the research results can be replicable with minor errors or biases (Yin, 2017). Multiple methods that address reliability (Creswell & Poth, 2016) were implemented in this research. First, I developed interview protocols to maintain the consistency of the data collection. Second, I used two recording devices in case the digital file might become broken. Third, peer review was used to ensure accuracy.

### **Ethical Considerations**

In the current research, I cautiously attended to ethical issues during data collection and data reporting. According to Creswell (2014), researchers should conduct every step of the research in an ethical manner. In essence, I followed the Tri-Council Policy Statement (Canadian Institutes of Health research et al., 2018). Before collecting data, I obtained the research ethical approval from Institutional Review Board at the University of Ottawa. Following this, I sent the consent form to the participants so that they could be informed about the information of the research and their rights, such as withdrawing from the research anytime. Pseudonyms chosen by participants were used in this research to keep confidentiality. Although five of the participants were my previous colleagues, I had no power relationship with any participants. The participants signed the consent form based on voluntary participation at their language preference (i.e., either in

English or in Chinese). In the initial interview, I restated the research purpose and their rights. I also highlighted that I was in a position to learn about their beliefs as a researcher. Moreover, I stored the data in my hard drive protected by a password. All printed data was safely locked in the cabinet of my home office.

### **Summary**

This chapter introduced the research methodology for this study. Qualitative multiple case study was chosen to best answer the how question in the current study. In line with the methodology, I purposefully selected six participants as described in the sampling procedures. Following the descriptions of their demographics, I described each participant's school context to help readers make sense of the participants' teacher beliefs and lesson planning. I collected rich through a two-round interview with each participant. After the data collection, I translated and transcribed the data to prepare myself to conduct the within-case and cross-case analysis. Finally, I discussed the trustworthiness and pertinent ethical issues of the study.

The next chapter will present the findings of the study.

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## Chapter 4: Findings

This chapter discusses the findings of the study. This study aims to explore the impact of teacher beliefs about VSCMC on teachers' lesson planning. This study adopted a multiple-case approach to answer the research question. The methodology chapter maintained the transparency and accuracy of the data and guided the data representation in this findings chapter. The within-case analysis in this chapter is presented in a straightforward descriptive manner. Meanwhile, the cross-case analysis mobilizes findings from each case through comparing and contrasting individual cases.

As discussed in the methodology chapter, I follow Yin's (2017) recommendation to present the findings in two sections. The first section focuses on a within-case analysis, including pertinent findings of teacher beliefs and lesson planning. The second section presents findings from the cross-case analysis by comparing each case to present the collective understanding of how teacher belief impacts lesson planning. The discussion chapter that follows this findings chapter includes an interpretation of the study's findings.

### **The Case of Lynn**

#### ***Pedagogical Beliefs towards VSCMC***

When asked about her beliefs regarding the best practices in a VSCMC context, Lynn commented that "the choice of...approach entails a deep consideration of the context and teaching resources." Since students learn language primarily through visual and aural cues in a VSCMC setting, she believed VSCMC learning is preferable for listening and speaking rather than reading and writing.

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Lynn conceptualized the teacher-centered approach as the establishment of teacher authority and control. Meanwhile, she defined the student-centered approach as a progressive decentralization of the teacher's power. She indicated that the student-centered approach was more applicable for one-on-one or two classes. She explained, "teaching can be more individualized when the number of students is less." As such, she concluded that the number of students in a class was related to the choice of the approach.

When Lynn taught more than two students, however, she argued that it was challenging to implement a student-centered approach due to the videoconferencing setting:

Activities, such as projects and drama, are easier to organize in a face-to-face setting...

[In videoconferencing setting,] the teacher-student communication and interaction will be negatively influenced by not being physically present...Students are more likely to be inattentive...So I employed a teacher-centered approach more.

On the other hand, Lynn indicated that VSCMC addressed students' needs through small-scale classes. In that angle, VSCMC was in line with the student-centered approach.

### *Self-efficacy Beliefs towards VSCMC*

During the interview, Lynn was very confident with teaching in a VSCMC context. She had rich experiences in using varied VSCMC teaching platforms:

The teaching platform does not have a high threshold for using the technology...It is because the teaching platform does not have too many functions...I think I can be fully capable of using the features and functions of the teaching platform. I have applied all those functions in my own teaching practice. Even if some features cannot be applied in

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my class, I also know how they can be used.

Moreover, Lynn implied that evaluating teaching could be very complicated, depending on "the standard of measurement." When evaluating her teaching, she argued that "it is successful" in terms of exposing students to language contexts and promoting their oral communication skills. Nonetheless, she added that "it is also not successful" due to the incompleteness of VSCMC teaching, which could not meet all the student's learning needs. Therefore, the result may vary due to different stakeholders and standards.

### ***Value Beliefs towards VSCMC***

Lynn made a rational judgment about VSCMC by indicating "gain[ing] a benefit from online learning [means] los[ing] a benefit of face-to-face teaching." She discussed the numerous benefits and weaknesses of VSCMC (See Appendix D).

Lynn argued that online learning could supplement face-to-face schooling with additional choices of programs. Moreover, she believed that students could "hand in their homework on the platform" and "speak more." She added that VSCMC teaching could be more individualized. Also, the family could choose fairly cheap classes for their children.

However, Lynn assumed that VSCMC teaching was "not complete." She commented, "In online teaching, children can only sit there quietly, which can only meet part of the learning needs...that is not sufficient for English learning...some parts of teaching are impossible or hard to be realized in an online setting...So teaching is not complete...Since the content for online teaching is not complete, the assessment cannot be complete as well..."

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Furthermore, Lynn pointed out many pitfalls of VSCMC teaching due to its incompleteness. She offered me an example by stating “writing is not appropriate because the students type very slowly. If they write on a piece of paper, I can only ask them to write words. It would be hard for me to read sentences or paragraphs on their paper. It would take too much time on checking their writing.” She added, “Since students have to stare at the screen for a long time when reading, parents would worry about their eye health.”

She also discussed the issues in classroom management. She pointed out that “the students might run away or do something else.” Moreover, she indicated that the teaching and learning efficiency of VSCMC teaching could be lower than face-to-face teaching. She claimed:

Given that the same teacher teaches the same group, I think face-to-face teaching is more efficient than online teaching...online learning has... minimal interpersonal interactions. I think it is challenging to teach without physical contact...Students are more likely to be inattentive...Besides, the teacher-student communication and interaction will be negatively influenced by not being physically present...

Lynn mentioned numerous challenges in teaching, such as engaging students in peer interactions, attracting students' attention, designing activities, and conducting the summative assessment. Meanwhile, she had to "be very exaggerated and act hard." Given the pitfalls she mentioned, she suggested that "beginning young learners learn better in a face-to-face classroom."

Albeit the challenges of VSCMC, Lynn thought VSCMC could be a good idea. She believed that “online teaching is just one of the dishes, but you cannot count on it to resolve all

the problems.” She analogized the emergence of VSCMC teaching to "industrial upgrading." She argued that it was critical to "know exactly what the upgraded parts are capable of." She viewed VSCMC as an extra opportunity for students to learn English. Meanwhile, traditional face-to-face learning still existed.

### ***Lesson Planning***

Lynn demonstrated how she planned her lessons for VSCMC teaching (See Table 6).

**Table 6**

#### *Lynn's Lesson Planning*

	What	Why
Learning Objectives	I learned about pre-developed objectives wrote by the curriculum designers. Objectives are primarily lower-order thinking skills. The breakdown of objectives is more detailed. I added more objectives for fast learners. I recapped learning objectives that are not achieved in previous lessons.	Objectives are congruent with students' learning outcome and parents' expectations Teachers cannot delete and change learning objectives. Objectives concerning leadership and higher-order thinking skills are difficult to be achieved. VSCMC is less efficient, so it needs more time to achieve the same objective as in a face-to-face class. Objectives should be in line with students' levels.
Content and Materials	I learned about pre-developed content wrote by the curriculum designers. I added elements, such as cartoons, that interest students. I replaced some realia to online resources and use more video resources.	Teachers cannot delete and change the content. Content should be relevant to students' daily life and communications. Teachers need to consider students' preferences and interests. Multimedia resources, such as video, visual, audio, are more appropriate.
Teaching Methods	I learned about pre-developed teaching steps and activities. I changed activities that could better achieve the objectives.	Activities designed by developers are more reliable but might not be the most efficient ones. I need to rule out activities that are not appropriate for VSCMC.

	<p>I asked questions more intensively.</p> <p>I chose teacher-controlled activities and close-ended questions.</p> <p>I prepared close-ended guided questions when asking an open-ended question.</p> <p>I would quickly move to next topic when students got stuck</p> <p>I would not involve too much kinesthetic movement, such as jumping and running.</p> <p>I would not involve too much free talk and peer interaction.</p> <p>I gave students less reading and writing time.</p>	<p>I should offer students more opportunities to speak.</p> <p>Parents do not expect the class to be very quiet.</p> <p>Activities should attract students' attention due to their short attention span.</p> <p>It is difficult to make judgements about students' understanding due to the unclear view of camera.</p> <p>It would be challenging to manage a class without physical presence.</p> <p>Checking reading and writing is difficult and time-consuming.</p>
Assessment	<p>Summative assessment was accomplished after class.</p> <p>I implemented formative assessment, such as observation and portfolio, during class.</p>	<p>It is hard to supervise summative assessment due to the limited view of the camera.</p> <p>Students' works can be automatically saved on the platform.</p>
Technology	<p>I used the fundamental video, audio features.</p> <p>Teachers and students could both annotate.</p> <p>I shared my screen and files.</p>	<p>Fundamental features are the visual and aural cues.</p> <p>I could use the tools to engage students.</p> <p>I could present the content and materials in my computer.</p>

When discussing how she made decisions, she believed that it was very critical to consider human elements (e.g., students' preferences and cognitive development, parents' expectations) and technological elements (e.g., using the platform, multimedia resources, and lack of physical contact):

Many factors will influence the teaching practice... Those choices I made are owing to the fact that the students are too young... age difference is not significantly influential... After all, the age difference is just 2 or 3 years. I think I will consider students' level... Teaching needs to align with students' levels... Because age, English level, and parents'

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expectations are fundamental, other information is not as critical...Also, I need to have an in-depth understanding of the students through teaching and interaction. After several lessons, I could learn students' characteristics, preferences, and cognitive development...I will see if I can revert those face-to-face activities into an online version...I will choose content and teaching methods that are most appropriate in an online setting.

### ***Beliefs and Lesson Planning***

When reflecting on the impact of her beliefs on lesson planning, Lynn perceived a “dynamic” process. She pointed out:

In the beginning, I have a lot of uncertainties because of not knowing how to use the online teaching tools. Through consistent trial and error, I know what to expect in online learning. I will also refer to my experience in face-to-face teaching. I will see if I can revert those face-to-face activities into the online version. After that, I will reflect on whether it is worth doing so. So, I can conclude what online teaching is capable of and what it is not. Or what is worth and not worth in an online context.

### ***Summary***

Lynn made decisions about approaches based on "context and resources." She believed a teacher-centered approach would be more appropriate in VSCMC settings with more than two young children. Due to “not being physically present,” students might “run away” from the task. Besides that, students might get distracted due to the shortened “students’ attention”. As such, she would employ "controlled practice" and "close-ended questions" more frequently. Given her abundant VSCMC teaching experience and low "threshold for using the technology," she had a

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strong efficacy of teaching in the VSCMC setting. She valued VSCMC teaching as an added value for EFL young learners. Moreover, she thought VSCMC teaching was not "complete" because it could "only meet part of the learning needs." When planning her lesson, she considered human elements and technological elements. From her account, she highlighted the "students' interests" and "levels," which aligned with the student-centered belief. Besides, she designed her methods based on the features of the teaching platform, such as "annotation" and "screen sharing." According to Lynn, her beliefs impacted lesson planning in a "dynamic" manner. In the beginning, she was confronted with numerous "uncertainties." In her practice, she not only counted on her "previous experience" but also continued to build new knowledge of students and technologies through experimentation and reflection. That said, trial and error in her teaching formed her belief, which in return affected her lesson planning.

### **The Case of ChrisLeeson**

#### ***Pedagogical Beliefs towards VSCMC***

During the interview, ChrisLeeson was quite explicit about his belief. He stated that teacher beliefs outweighed teaching methods. He defined a teacher-centered approach as grammar-based drilling and memorization. Nonetheless, he was not in favor of a teacher-centered approach due to his previous learning experience:

When I was young, most teachers used teacher centered approach. They wrote on the blackboard and asked the students to recite, repeat and copy what they wrote. During most of the class time, the students were merely listening. The students did not know why they needed to learn. Basically, they learned because of the teacher and parental

authority. We were imbued with a learning purpose, namely achieving full marks. As such, students were unable to enjoy learning...

ChrisLeeson indicated that he was a true believer in the student-centered approach. He highlighted the human element in that teaching should align with students' needs. He conceptualized the student-centered approach as creating relaxing and enjoyable contexts where students could learn more efficiently. Accordingly, he considered students' needs and characteristics:

It is very hard to articulate a relaxing status...What you need to do is to make students happy and like you...children do not learn from people they do not like...your class cannot be content-oriented...teachers should react in alignment with student's needs...teachers need some time to consider the children's personalities and cultural backgrounds.

Moreover, ChrisLeeson argued that the core of the student-centered approach was to take "student needs" into consideration. Aligning with his belief, he exemplified how he would address students' needs through peer learning and building a safe learning community:

If a kid was a bit shy, for example, I would not worry too much. What I would do is to encourage him a little bit. I would give him more time and ask another kid...As a teacher, I think I cannot have bias. I should treat all kids equally...if one student cannot answer the question, teachers may ask another student to help...They build a bond with the teachers and each other.

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### *Self-efficacy Beliefs towards VSCMC*

ChrisLeeson displayed strong self-confidence in the interview. He was also very confident with his answer, which was rooted in his extensive experience of teaching with different technological tools, such as Skype, QQ, Zoom, and other tools developed by the school. After experimenting with those teaching platforms, he finally made decisions on the platform for his school due to its “interactive features,” such as moving and adjusting “students’ video frames,” rolling “dice,” annotation, and the “responder.”

ChrisLeeson was highly self-assured in his ability to use this platform. After experimenting with all the features, he now claimed that “I am an expert” in using this teaching platform to teach EFL students. He asserted, “I can make full use of this teaching platform with ease...Since I have been teaching with this platform for a long time, I will experiment with every new feature with novel activities in my class.” When evaluating his teaching, he considered the retention rate as the summative assessment. He declared, “The retention rate is about 70%, which is higher than the average 30%-40% among English Commercial schools. Parents and students appreciate my teaching.”

### *Value Beliefs towards VSCMC*

ChrisLeeson held a very positive belief towards VSCMC. He discussed both benefits and weaknesses of VSCMC teaching (See Appendix D). Essentially, he argued that online teaching promoted education equality in China. He mentioned:

Education resources in China are not evenly distributed, which is far from equality...If those one-on-one online teachers could teach one-on-small groups, more students would

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be able to benefit...we have taught students from Shandong, Inner Mongolia, Shenyang, Xiamen and Xinjiang...What we need are teachers, devices and internet speed. Also, affordability is very critical for the parents...

On top of the number of resources, ChrisLeeson argued that the quality of VSCMC was also satisfying. He affirmed:

Some children were resistant to having online class at the very beginning. But they gradually fell in love with the class due to good teachers. Some children might find online teachers were different from their face-to-face teachers in their cities. Children from Inner Mongolia, for example, might not have been taught in such an interactive way in their face-to-face classes as they did in the online class. We used many realia, wore different costumes, and made the students laugh.

ChrisLeeson further discussed the small-scale VSCMC class benefited students in China: Even if you are in first-tier cities in China, the class scale will be around 40 students. Less than ten students will have an opportunity to speak in the class. For other cities in China, the class can be more than 50 students. It is impossible for teachers to attend to each student's learning needs. The class size in my school is less than 6 students so that the teacher can respond to every student.

When asked about challenges for children in a VSCMC setting, ChrisLeeson admitted that not all children were suitable for online learning. He noted that those students, "who do not have good learning habits," could not learn effectively in VSCMC setting. For example, the teacher could not force students to listen if the students were often absent minded. He also talked

about students living in remote areas in China. He pointed out that parents often relocate to first-tier cities, such as Beijing or Shanghai, to find sufficient work to support their families. As a result, grandparents became responsible for taking care of children. He maintained that those children were facing more challenges because of how difficult it is for most grandparents to help children with technology.

Notwithstanding that those students who might need extra time to adapt to VSCMC learning, ChrisLeeson argued that the current pandemic had promoted the spread of VSCMC, thereby making adaptation less overwhelming. He reasoned, "When everyone is doing the same thing, it will not be challenge anymore."

### ***Lesson Planning***

ChrisLeeson was very specific about how he planned his lesson (See Table 7).

**Table 7**

#### *ChrisLeeson's Lesson Planning*

	What	Why
Learning Objectives	Objectives are primarily listening and speaking at the elementary level. Each unit includes word recognition (5 words per unit) and phonics. Writing objectives for students that are older than 7 years old.	I prefer both English Standard in China and CEFR. The number of vocabularies for each class depends on children's cognitive development and parents' expectation.
Content and Materials	I used comprehensive English course (i.e., focusing on key vocabulary, sentence structures), which was same as face-to-face school. I added videos and pictures and use realia.	I referred to textbooks from various renowned publishers (e.g., Cambridge or Oxford Express).
Teaching Methods	I followed PPP model (i.e., present, practice and produce).	Based on prior experience, PPP model is very efficient.

Assessment	I assessed students' mastery of knowledge in the closure session.	It aims to ensure the closed cycle of teaching.
Technology	<p>Most basic features I used was to upload the slides and multimedia to the platform. I could open the files in the teaching platform.</p> <p>I adjusted my video frame, such as enlarging my video so that students could see me clearly. I dragged the students' video frames to the center.</p> <p>There were many useful tools, such as dice, responder, annotation authorization, including dragging pictures and drawing.</p> <p>The most interesting feature I used was taking screenshots.</p>	I want to engage students in activities and make them relaxed and happy.

As he discussed previously, teachers should prepare their lessons in line with the ready-made curriculum that existed in his school. He also added, "Whereas I can expand different content for different classes, the basic learning goal should be the same."

ChrisLeeson believed that vocabulary and grammatical knowledge were at the core of his lesson. The teaching content and activities should align with the learning objectives. He suggested that all four skills (i.e., listening, speaking, reading, and writing) could be taught online. However, those skills should be developed appropriately according to age.

ChrisLeeson argued that teaching procedures in VSCMC settings were the same as in face-to-face classes. He exemplified a lesson regarding how he implemented the PPP model (i.e., present, practice, and produce), which he believed was "indispensable" in EFL instructions.

When planning his lesson, ChrisLeeson also took technology into consideration. He often gave feedback to the company that developed the teaching platform. He explored the

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incorporation of new features when the teaching platform was updated to a new version. He discussed the features that were used frequently, such as sharing multimedia resources, adjusting video frames, and other useful tools (e.g., "dice, responder, annotation authorization, including dragging pictures and drawing"). Besides, he had developed plenty of interactive activities with the screenshot feature.

### ***Beliefs and Lesson Planning***

ChrisLeeson reflected that his beliefs "defined" how he planned his lesson:

I think different teachers might have different beliefs... I think it is important to provide high-quality services to students, create a secure and relaxing learning environment where they can be immersed in the language environment and acquire the language naturally...Also, we offer classes with a fixed teacher, fixed time, and fixed classmates. Some online commercial schools are different. As a result, students may meet a new teacher each time and do not learn regularly. Those students will meet different peers in each class. They do not have homework because the teacher will be different. The teaching is not consistent. This reflects how different beliefs may have different lesson structures and plans.

### ***Summary***

ChrisLeeson insisted on student-centered beliefs, which he believed could genuinely benefit students. Specifically, he highlighted an "enjoyable" and "secure" learning environment as the core of student-centered belief. He was very confident with the teaching owing to his years of experience in multiple teaching tools, such as "Skype, QQ, Zoom," and highly favorable

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feedback from parents. He thought highly of VSCMC teaching for children because of numerous benefits, including "promoting education equality in China," "offering high-quality teacher resources," and individualizing teaching with "small-scale class." Meanwhile, he assumed that children were suitably adaptive to the VSCMC context. He also admitted that some children were not suitable in the VSCMC context due to their "bad learning habit." Meanwhile, he mentioned the cases in a remote area, where "parents would relocate to first-tier cities," while "grandparents became responsible for taking care of the children." As such, the grandparents were often not able to offer technological support. Although claiming to hold a student-centered belief, he employed the PPP model, which was considered as a teacher-centered approach. When discussing the impact of beliefs on lesson planning, he maintained that his belief "defined" his teaching practices, in that "different beliefs may have different lesson structures and plan." He would continue to follow what he believed to be accurate.

### **The Case of Yinko**

#### ***Pedagogical Beliefs towards VSCMC***

Yinko defined the teacher-centered approach as "teacher-directed" instructions, while student-centered approach as centralizing the role of students. She highlighted the role of teachers in a student-centered approach, including "facilitators, observers and record keepers."

Before Yinko answered my questions regarding lesson planning, however, she stated her fundamental principle of designing a lesson, which showcased her student-centered beliefs:

I capitalized on the students' engagement... [which was] a more critical issue for online teaching due to the aforementioned technical constraints...The students' engagement

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prioritizes the amount of teaching content in an online teaching context. The more the students enjoy the class, the better way of designing the class. If the students do not engage or enjoy the class, it is impossible to talk about teaching efficiency.

Meanwhile, Yinko's school offered a fixed syllabus and curriculum, which did not offer her too much flexibility. Under such circumstances, she incorporated both approaches to assure student engagement and teaching efficiency. She maintained that the combination of both approaches could best benefit her students:

Some parts are teacher-centered, and other parts are student-centered...I lectured and demonstrated during the class, which was essential. I also spared some time to give students authority...If I only implemented a teacher-centered approach, students would be less engaged, in that I could not attend to every student's need, and the teaching efficiency would be low. If the class were entirely student-centered, however, I think the outcome would be questionable. Concerning language class, I think teaching vocabulary and phonics should be more teacher-centered for young children. Also, the teacher-centered part is indispensable in grammar instruction. For other sessions, I would like to offer students more opportunities to interact with me and give them more authority, which is student-centered.

Compared with face-to-face teaching, VSCMC teaching entailed more time for a teacher-centered approach due to technological constraints, such as classroom management and internet problems. Yinko argued that the pro of teacher-centered approach was highly controllable:

...interaction is more taxing to organize in an online setting...it was really challenging to

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manage the class...teacher-centered approach...is a more manageable means of teaching online...I must consider technical issues and students' limited attention span. If I interact with one student each time, I will only concern his or her reactions. If it is teamwork, however, I will have to take care of all students' reactions and attentions at the same time. Once they do not stay on track, it will not be as easy for me to get them back as I can in a face-to-face setting.

### *Self-Efficacy Beliefs towards VSCMC*

The teaching platform Yinko used offered many tools, which "to a large extent, ...simulates a face-to-face teaching." She discussed:

First, it allowed me to annotate and design graphic organizers. Second, both teachers and students could have certain number of authorities, which resembled the face-to-face class. Third, it was compatible with many forms of files, such as PDF, PPT and word. From my experience with the teaching platform, I think it is a very functional online teaching platform.

As an experienced teacher, Yinko was quite confident with the teaching platform by experimenting with it. She asserted, "I think I am quite good at it...[and] can develop a wide variety of activities with multiple tools...I have used it to develop a lot of courseware, so I am pretty familiar with all the functions." However, she also faced some challenges before familiarizing herself with the teaching platform. Specifically, she indicated that teachers were facing dual challenges: managing teaching platform and students at the same time:

Since it offers many tools, it can be challenging...If I am not familiar with the tools, I

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might not be able to shift between them. Internet speed may cause the ambiguity of the video... Also, the audio may delay as well...online teaching weakens eye contact. It is hard to tell if the students are watching you...If the teacher spends too much time on classroom management, the teacher may not finish the class. If the teacher does not manage the class or barely care about it, the efficiency of learning would be low due to the inattentiveness of many students

Simultaneously, Yinko showcased confidence when discussing resolving problematic issues. She connected problems with a learning opportunity:

I also came across problems. Even if there might be some unsatisfactory outcome, I think I can still reflect on my teaching and gradually make adjustments... [For example,] I would like to design my online teaching with the same duration of an in-person face-to-face class. It would be impossible to monitor or supervise students doing their worksheets in an online class. So, I need to reorganize and delete some ready-made materials and content... I did not set up too many different steps because it will be taxing to transit between steps. ...Eventually, I believe I can fix the problems. I think I have the capability of that. My confidence comes from my love of being a good teacher and my cumulated teaching experience.

When asked to evaluate her VSCMC classes, Yinko examined her teaching through the lens of her fundamental principle, namely student engagement. Based on her criteria, she gave positive comments to her teaching:

I think I care more about how students feel and engage...I am responsible for and capable

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of meeting students' needs and preferences. The students will not think it is a waste of time to sit in front of the computer.

Even though Yinko thought the overall efficiency of VSCMC teaching was lower than face-to-face teaching, she believed that she could “accomplish the same goal as face-to-face teaching” in VSCMC settings.

### *Value Beliefs towards VSCMC*

Yinko mentioned both pros and cons of VSCMC (See Appendix D). She perceived that the efficiency of VSCMC teaching could be lower than face-to-face teaching due to technological barriers, low video qualities, weakened eye contact, and students' short attention span.

Even though there could be numerous challenges and pitfalls as she outlined above, Yinko suggested that “videoconferencing class is not necessarily inferior to face-to-face teaching”. In other words, Yinko believed that the common perception of VSCMC teaching was inferior to face-to-face instruction. However, she did not fully agree with the common perception. Accordingly, she believed that children who were “self-disciplined could save commuting time.” Students also acquired “technological skills,” which Yinko thought would be “the critical skills in the 21st century.”

However, Yinko believed VSCMC might only meet some children's needs. Specifically, students who were less "self-disciplined" had a short attention span were not appropriate to learn in the VSCMC context. She added that the current VSCMC teaching failed to individualize EFL teaching for children. In all, she preferred “face-to-face teaching” to VSCMC teaching. She explained, “Within the same period of time, face-to-face learning is more efficient.” She argued

that VSCMC teaching needed more time to achieve the same goal of face-to-face teaching.

Finally, Yinko appreciated VSCMC as a means of EFL instructions. Specifically, it showcased an effort to promote education equality for Chinese EFL learners. She argued:

I think it is a good idea...It helps distribute education resources evenly to the market. As such, videoconferencing teaching increases the possibility that people from different regions can be able to attain a more equitable education resource...Although there are a lot of influential factors, it still provides opportunities of learning from high-quality teachers for children from places that lack of education resources...the education resources are attainable for more children...for those families who do not have time to commute between commercial school and home, online classes can also resolve these problems. Now, there are many online courses with different prices and quality...Each family can make decisions based on their economic status.

### ***Lesson Planning***

Yinko specified her lesson planning based on students and technology (See Table 8).

**Table 8**

#### *Yinko's Lesson Planning*

	What	Why
Learning Objectives	I developed lesson based on preset syllabus and curriculum from the school. I Integrated speaking and listening into reading instructions.	Teachers follow fixed curriculum designed by the school. Those skills depend on visual and audio features.
Content and Materials	I used same textbook/readers as in the face-to-face classroom. I deleted some handouts and worksheets.	Readers offer authentic context for speaking and listening. It is impossible to monitor or supervise the completion of

		worksheet.
Teaching Methods	I developed interactive games and activities. I made use of the features of the teaching platform. I converted face-to-face activities into online activities. I designed simple games for young children (e.g., guessing game). I designed group activities for older students (e.g., spelling a word together). I also asked students to predict.	Students are more attentive when they engage in the class activities. Older students have a higher level of technology manipulation and learn through collaboration. Students are more focused and intrigued when playing games. Simplifying game procedures allows for an easy transition between steps.
Assessment	I used running records, including vocabulary, reading comprehension and fluency, grammar.	The platform can document and understand students' progressive learning trajectories. Test time depends on students' level.
Technology	I used annotation, uploading files, authorizing students, and blackboard.	I can interact with students.

She began with learning objectives. To achieve the same goal as face-to-face teaching, she discussed, "I would like to design my online teaching with the same duration of a face-to-face class."

Besides, Yinko used the same textbooks in VSCMC settings as in the face-to-face classes. Meanwhile, she replaced some ready-made content and materials, such as handouts and worksheets, with other forms of activity. She elaborated that "it would be impossible to monitor or supervise students doing their worksheets in an online class."

Regarding teaching procedures, Yinko argued that online teaching procedures should be more simplified due to the fact that "it is taxing to transit between steps." Among all the aspects, she highlighted the skills of teacher-student interaction and classroom management. She developed activities with respect to different age groups of students. During lesson planning, she

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also took technological tools into consideration, which allowed her to interact with students.

### ***Beliefs and Lesson Planning***

In her account, Yinko frequently talked about "interaction", which was rooted in her teaching belief and guided her lesson planning. She broadly considered students' reactions and how best she could engage students in games and activities. Those considerations were primarily rooted from her beliefs. She offered concrete examples regarding how her beliefs affected her planning:

I think... [my belief] does affect my lesson planning. It is how I understand English teaching. If I had never taught online, I would not know its outcome. I would be confused or in doubt regarding online teaching. I think my understanding of online teaching will affect my teaching practice. I would be more likely to incorporate online teaching into my curriculum. I think I can save a lot of time if I can be competent in using the technology. I would like to choose online teaching if I think online teaching can reach the same teaching goal as face-to-face teaching. Meanwhile, I also like to share those advantages of online teaching with more parents. So, more people will accept and try it. So, I am more willing to use it.

### ***Summary***

Yinko valued both the teacher-centered approach and student-centered approach in a VSCMC setting. She would consider more "teacher-directed activities" and "games" with the consideration of balancing "teaching efficiency" and technological barriers, such as "internet problems." However, she also displayed her student-centered beliefs by spotlighting the "students' needs" and "reaction." Besides, she stated to be "quite good at" teaching in VSCMC

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settings, indicating strong self-efficacy in delivering successful VSCMC classes due to her rich experience with EFL learners and technology. Moreover, she considered VSCMC was more appropriate for self-disciplined students. She believed "VSCMC teaching is less efficient than face-to-face teaching" given the same period of time. Nonetheless, she held a positive belief towards VSCMC, in that it strived for "education equality for Chinese children." When planning her lesson, Yinko considered her student characteristics and technological factors. For example, she did not use handouts for it would be difficult to supervise the task in VSCMC settings. Above all, she indicated that her belief influenced lesson planning and teaching practices. More precisely, her value belief and self-efficacy belief motivated her to "incorporate online teaching." Her student-centered belief guided her to value "student engagement" in her lesson planning.

### **The Case of Andy**

#### ***Pedagogical Beliefs towards VSCMC***

Andy stated that there was not a "one-size-fits-all method." He believed that teaching practice should be in line with the student needs. Accordingly, he would choose the appropriate approaches based on the understanding of students' levels of English language proficiency. He commented:

If the student has some basic understanding of English and can communicate a bit, I will employ a student-centered approach. I will encourage the students to output more, such as dialogues...If the student is at the beginning level, I think a teacher-centered approach is better because the student needs more input. That said, I will take the lead and model activities. Even the student will merely listen to me.

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Moreover, Andy conceptualized learning as "an iterative and progressive process." Given his understanding of learning, he would follow "I do, you watch," "We do together," and "you do independently, and I watch," which he believed aligned with his student-centered beliefs. He further discussed the curriculum in his school:

My school thought drama had some marketing values. I was in charge of the development of drama lesson...I asked the students to repeat what the teacher said in the first level. For example, the cat said, "I am happy", and the student repeated it. Then, students were encouraged to say it with the teachers' cues and prompts in second level. In the next level, the students learned to interact with each other by asking and answering questions. The final level, the students created their own stories.

After elaborating on the curriculum, Andy concluded that "the primary goal was to help students make progress step by step...and become independent learners". He further stressed that his teacher-centered methods served the ultimate goal of achieving student-centered beliefs.

### ***Self-Efficacy Beliefs towards VSCMC***

Andy had used numerous teaching platforms, such as Zoom. All the teaching platforms shared features, such as "sharing screen", "annotation", and "text". His school had developed its teaching platform to be compatible with its curriculum. The platform allowed him to use a "pointer, annotation and text." He could "mute or unmute" his students. Based on his competence in using the tools, he perceived that he could be qualified to teach EFL learners in VSCMC settings. He asserted, "I could use all the features...I think I can get a pass."

Andy believed, however, that his teaching still needed improvement. His predominant

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concern was students' motivation. Particularly after a brief initial “honeymoon phase”, some students became bored with the technology. As a result, he contended that the teaching efficiency was considerably weakened:

I think what needs to be improved is how to interest the students. Students who have been learning online for a period of time would be very familiar with the teaching style. So, they might be tired of the class. At the very beginning, they would be very excited about the online class. Once they have done that for a period of time, they will not be that interested. As a result, they will not listen attentively...

When asked to evaluate his VSCMC teaching, Andy did not illustrate adequate confidence. He thought he might need more experience:

I do not think it was very successful. I did not spend too much time on lesson planning...I have not taught one-on-small groups but only one-on-one classes. It is easier to manage a class with only one student. It would be more challenging to teach a group of students. I still need more experience regarding small group teaching.

### *Value Beliefs towards VSCMC*

Andy believed that the processes of learning English in both face-to-face and online contexts were identical, namely “input first and then output.” Based on his assumption, he discussed both advantages and disadvantages of VSCMC teaching (See Appendix D).

As an online teacher, Andy noticed many benefits, such as saving time, flexibility, and convenience. Besides, he indicated that the teaching platform was more interactive than the traditional classroom. Moreover, he claimed that parents and students, particularly those from

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low-income areas, had more access to “high-quality teacher resources” with lower costs. Parents and students did not have to spend time on the commute.

On the other hand, Andy perceived that teaching was weakened due to technical problems and internet delay. Andy thought "the online student-student interaction is not as direct as the face-to-face classroom." Albeit that he believed that English knowledge and thinking skills were both achievable in VSCMC settings, Andy considered his teaching to be incomplete due to lack of student-student face-to-face interaction.

Besides this, Andy provided examples of how challenging it was to attract and motivate students. He noted, “since some activities are unable to be conducted, it is hard to attract students’ attention all the way.” As a result, Andy argued that classroom management could be highly challenging in VSCMC settings due to students' limited attention span.

In addition, Andy suggested that the technical superiority in VSCMC contexts only existed when compared with some of the traditional classrooms:

...many face-to-face commercial schools are equipped with an interactive whiteboard.

That said, many face-to-face classrooms have the same tools as the online classroom.

Besides, face-to-face schools could allow teachers to organize activities that are not plausible online. It is easier to have group activities and activities that involve physical movements.

Given his critical analysis, Andy believed that VSCMC could still benefit EFL language learners. Although the teaching efficiency of VSCMC was lower, he thought it would not be a problematic issue in the long run. As he stated, students' consistency of learning would bring

about a satisfactory outcome. He concluded:

I give it 70 or 80 scores...I think it has a lot of advantages. It can meet a lot of needs to help children...For beginners, we focus more on speaking and listening. If the students can have the opportunity to learn from good teachers, they can benefit a lot. As I know, some face-to-face commercial students do not always encounter good teachers. Also, the excellent quality of input will lead to the output. I think vocabulary, grammar, and other content can be taught online...it can be better to learn both online and face-to-face.

### ***Lesson Planning***

Andy explained how and why he made decisions during the lesson planning process (See Table 9).

**Table 9**

#### *Andy's Lesson Planning*

	What	Why
Learning Objectives	I aimed to promote independent learning. I chose key vocabulary and sentence structures based on the high-order questions at the back of the readers.	I could help students become independent learners. Parents could easily check and understand what students learn.
Content and Materials	I chose leveled readers from an American publisher based on students' levels I developed vocabulary lists from the readers.	I benefit from reading, and he believes it will also benefit his students. The vocabulary list can support students' output.
Teaching Methods	I integrated drama. I employed PWP (i.e., prior reading, while reading and post reading).	I should develop lessons to meet the school requirements and market needs I also refer to prior teaching experience.
Assessment	I asked parents to assist the students by paper test.	It is not convenient to supervise students in online teaching.

Technology	I used screen share, pointer, annotation, text, and authorizing students.	I could present the content. I could enhance students' engagement.
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He suggested that “the primary goal is to help students make progress step by step from teacher-centered class to the student-centered class.” Therefore, he gradually offered students more authority.

When developing objectives, Andy referred to the comprehension questions at the contained with the textbooks he used and rewrote them into his teaching objectives. Simply put, he ensured that the choice of vocabulary and grammar aligned with those questions. He explained, "it could be time-saving and effective." As such, teaching goals were transparent and precise in that parents were aware of what had been taught in the class. Accordingly, he could ask parents' assistance in assessment. Moreover, Andy explained how he chose leveled readers as the teaching content. He demonstrated how he planned online English drama lessons through scaffolding, guided by his overall goal of cultivating independent learners.

Andy shared his satisfactory experiences with teaching platforms such as screen share, authorization, and annotation features:

Compared with face-to-face school, I do not need to clean up the classroom and the blackboard. I can simply click “delete” to erase my write on the blackboard. Also, I also need multiple of colors of markers in a face-to-face classroom. In an online class, I could save resources, such as markers, by using the annotation. I could use online timer in the platform and use a selector to choose a student to answer my question. In a face-to-face class, I needed to prepare many realia and teaching tools. To make the class more

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engaging, I made each student a card with different numbers. I chose the one to answer my questions through drawing lots. It was easier in an online classroom. I did not need to prepare auxiliary materials.

### ***Beliefs and Lesson Planning***

Finally, Andy reflected on how his belief guided his lesson planning:

Since I perceived the pros and cons of online teaching, I tried to optimize my online lesson planning by avoiding its drawbacks. I did not consider planning those objectives that could not be realized in an online setting. Also, I considered how to convert face-to-face activities into online activities. Since online teaching is not as efficient as face-to-face teaching, I broke down learning objectives. I think those objectives could be achieved, though I needed more time in online teaching. I also needed to plan classroom management time, such as technical issues and students' lack of attention. Although most of the content and materials could be applied in online teaching, I removed activities that involved bodily movement. So, I did not use total physical response too much in my classes. I did not need to waste time on content or objectives that were impossible to achieve in online classes.

### ***Summary***

During the interview, Andy enjoyed sharing stories about himself and his students. He did not believe in a "one-size-fits-all method." Instead, his primary pedagogical belief was student-centered belief, namely promoting "independent learners." Meanwhile, he integrated teacher-centered approaches based on his "understanding of students' levels," which served his student-

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centered belief. However, he was not very satisfied with his current VSCMC practice due to technical constraints and limited class scale. He reflected that he aspired to learn "how to interest the students" and teach "one-on-small group." Even though encountering challenges due to "the limitation of technology," Andy still valued the benefits VSCMC brought to EFL learners in China, such as more accessible "high-quality teacher resources" with low cost. Moreover, his lesson planning also aligned with his student-centered belief, such as the use of leveled readers and scaffolding, namely "I do, you watch," "We go together," and "you do independently, and I watch." Overall, Andy assumed that his belief influenced his teaching practices. his value beliefs and self-efficacy beliefs helped him "optimize my online lesson planning." His pedagogical beliefs guided the curriculum design, such as integrating "higher-order thinking questions."

### **The Case of Ariel**

#### ***Pedagogical Beliefs towards VSCMC***

Ariel suggested that learning in a face-to-face setting could be similar to learning in a VSCMC setting. Regardless of the contexts, Ariel brought up two critical elements in target language acquisition: sufficient language exposure and students' interests. Meanwhile, Ariel discussed technological challenges and differences in learning contexts:

The only difference is the context, which may lead to a lack of student cooperation and kinesthetic activities...the technology may also influence learning, such as internet delay, the limited use of body language, and the limited affordances of the teaching platform...Moreover, student attention span is shorter...

Ariel was not confident with fully employing a student-centered approach in the VSCMC

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setting. She expressed her primary concern regarding the lack of student-student interaction due to the physical distance:

If you give students a topic, for example, it is hard to guide them to have pair or group discussion...With the simultaneous physical presence in an in-person class, they can sit down and discuss how to accomplish the task, such as the choice of the leader, distribution of the task. Even if they are put in the same breakout group in the online setting, group activities cannot be conducted due to their age...I cannot see other groups and offer them helps. The prolonged time of reactions makes the activities less flow and less likely to be actualized. So, the physical contact and presence is the key to collaborative group activities.

However, Ariel indicated that a teacher-centered approach should be largely avoided. Meanwhile, she preferred employing a student-centered approach through engaging students with games and activities. She explained:

I think I need to offer students more time to speak and think independently...For example, I asked students to prepare a presentation at home and present it during the class in response to the reading materials that we had discussed. If we are teaching, for example, whatever topics, such as four seasons, animals, I would ask them to do some research about the topics. I would not ask them to simply read and comprehend what is presented in the reading. They could go beyond it by presenting their research and ideas. I think it is much better than distilling knowledge.

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### *Self-Efficacy Beliefs towards VSCMC*

Ariel was in favor of the teaching platform she had been using. The teaching platform offered numerous tools, such as sharing multimedia (e.g., PPT, videos, audio), sharing screen, adjusting students' video frames, and annotation, which allowed her to "have a similar teaching experience as in a face-to-face classroom." Apart from the advantages associated with the teaching platform, Ariel aimed at enhancing student engagement through what she regarded as her advanced skills in designing interactive slides. She reported:

I set triggers in the slides so that the students were able to see the animation effects by clicking them...some young children cannot use mouse properly. So, I enlarged the font size. I could ask them to read the letters or words aloud, and I helped them click.

As Ariel recalled, the transition from a face-to-face teacher to an online teacher was very smooth:

At the very beginning, it took me about a week to learn about the functions and a month to be proficient in using them. I also needed a lot of time to hone my teaching skills with students. Sooner or later, you will master it. It is just a matter of time.

When asked about how well she could use the teaching tool, Ariel gave herself "70 out of 100."

She explained:

Since I have been using the teaching platform for a long time, I do not have any problems using it...I think the problem does not lie in the tools because it is very functional and advanced. The deducted 30 scores are related to the internet problem, time spent in switching tools...

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Overall, Ariel gave her VSCMC teaching “80 out of 100.” She explained:

First, I still have more room to improve as a teacher, such as planning my lesson. Second, I think teaching online enlarges my weaknesses of teaching...I think I can give myself 80 as a teacher no matter where I teach.

### *Value Beliefs towards VSCMC*

Ariel shared her opinions about VSCMC teaching by comparing it with face-to-face teaching. She talked about both benefits and weaknesses (See Appendix D). She stated that teaching efficiency in VSCMC settings could be lower than face-to-face teaching. Specifically, one of the causes of the low efficiency was the manipulation of technology, in that she had to "consider the interaction with the students and manipulate the device." Other technological factors, "such as internet delay, lagging, the limited use of body language and the limited affordances of the teaching platform," also negatively affected her teaching. She pointed out, "It is also helpless for me when students have some technical issues, such as camera, microphone." That said, she could not solve technical problems, such as broken hardware, at students' end. She also expressed her concerns about the technological thresholds for some teachers (e.g., designing interactive slides) and students (e.g., using mouse and keyboard).

The second reason Ariel gave for her belief in the low teaching efficiency of online teaching was that VSCMC weakened teacher-student relationships. She believed that it took more time to learn about her students' personalities and characteristics. Moreover, it was more challenging for her to build rapport with the students. She explained, "it is because online teaching lacks eye contact and physical contact, which are quite significant in teaching." As a

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consequence, weakened teacher-student relationships alleviated the teaching efficiency.

The third reason lay in limited students' attention span. Ariel argued that the online context would "lead to a lack of student cooperation and kinesthetic activities." Although she could employ "multimedia to replace some face-to-face activities and games in a different way," the students had a shorter attention span, which hindered classroom management.

Ariel further pointed out that VSCMC teaching was not appropriate for students with special needs:

Students who had attention deficit hyperactivity disorder (ADHD) could not get sufficient support or attention. The commercial schools do not have a specialist to offer help. So, I think it is not very beneficial for ADHD students to learn in an online setting so early.

They could even barely stay focused in a face-to-face setting, let alone sitting in front of a camera for 25 or 50 minutes.

However, Ariel also recognized numerous advantages in online instruction. She believed that children of the new current era quickly adapted to online learning. Moreover, she thought young children enjoyed VSCMC settings more. She explained, "some games are fun, and I would set triggers in the slides so that the students to see the animation effects by clicking it."

Above all, Ariel preferred VSCMC due to her involvement and flexibility of time and space. She added, "for example, when I taught the theory of evolution, I searched a lot of interesting stories and different perspectives...After a year of teaching online, I think I have become tech-savvy from a tech novice..."

## *Lesson Planning*

Ariel gave an account of her lesson planning process with her rationales (See Table 10).

**Table 10**

### *Ariel's Lesson Planning*

	What	Why
Learning Objectives	I focused on reading and writing skills and strategies based on Common Core State Standard developed by the US.	Writing should not be overemphasized when they students are too young. Teachers should teach pertinent reading and writing skills and strategies. The purpose is not only for language learning but serve higher purposes of attaining knowledge and information.
Content and Materials	I chose Authentic content, namely materials that native speakers use, such as news, advertisement. I used textbook for American students and classical picture books (e.g., Peter Rabbit).	The teaching content should be appropriate for the students based on their age. Content written and used by native speakers is more naturalistic and accurate. I chose the textbook that I had used.
Teaching Methods	Students researched about the topic. Students presented during classes.	I should offer students ample opportunities to practice the language. I should offer students more time to speak and think independently. Presenting research and ideas is better than distilling knowledge.
Assessment	I orally assessed students at the end of the class. Students evaluated teaching on the teaching platform.	Mutual assessment is quite critical. Online teaching can integrate formative assessment.
Technology	I used annotation, screenshot, screen share, and adjusting video frames.	I need to present the content and interact with students.

She began with the development of learning objectives, which focused on reading skills and strategies. When designing the objectives, she “referred to Common Core State Standard

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developed by the US.” She also considered students’ ages when developing teaching goals.

Besides, her lesson planning was in line with understanding students’ preferences.

In alignment with the objectives, Ariel chose authentic materials, such as “a textbook for American Grade 2 students” and “some classical picture books, such as Peter Rabbit.” Her decisions regarding authentic materials came from her responsibility for her students.

Subsequently, she thought aloud her teaching procedure, including before reading, during reading, and after reading.

When designing activities, Ariel preferred individual interaction due to the “limitation of the technology.” She argued that it would be taxing to “organize group activities without the simultaneous physical presence of the students and teacher.” Therefore, she claimed, “individual activities and interaction would be more appropriate.” Following the teaching procedure, she reflected on how she incorporated bi-directional assessment between teacher and students.

Ariel mentioned features, such as “annotation,” “screenshot,” and “sharing screen,” which she considered as “fundamental” and “most useful” features of the teaching platform. She explained:

Annotation allowed me to highlight the key sentences and show which sentences the students should read. I took screenshot of the important sections in the reading. I could share my screen if I wanted to elaborate some parts or show them some pictures, which was quite convenient. Moreover, I could enlarge the students video frame if I intended to ask someone to answer questions. I could drag their videos from the top and made it larger so that I could interact with a specific student.

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### ***Beliefs and Lesson Planning***

Ariel argued that her beliefs evolved throughout her experience and guided her lesson planning:

First, I believed online teaching was a trend. After teaching online for a while, I could perceive how I could set my teaching goals, collect materials, and design activities. I thought about how I could adapt some face-to-face activities into online teaching. I set goals that were more compatible with online teaching...As I discussed before, online teaching was less efficient than face-to-face teaching. It would not be possible to achieve goals for before, during and after reading within three classes. I would stretch it to four or five classes. As such, the goal is more achievable.

### ***Summary***

Ariel believed that a teacher-centered approach would be indispensable due to multiple technological constraints, such as "lack of student cooperation and kinesthetic activities." However, she suggested that "teacher-centered time should be minimized as much as possible." For example, she "offered students more time to speak and think independently...by presenting their research and ideas". Compared with instilling knowledge, she argued that a student-centered approach could benefit students more. When revisiting her capability of teaching in VSCMC contexts, she was reasonably confident with her accumulated skills and experiences. Although she gave herself "70 out of 100", the deducted 30 points were not pertinent to her teaching capability but to "the internet problem and time spent in switching tools." Also, her self-efficacy belief was related to her pedagogical belief, in that she deducted the points of her overall teaching due to the incapability of organizing group activities. Moreover, she elaborated plenty

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of weaknesses of VSCMC teaching for children, such as "internet delay, lagging, the limited use of body language and the limited affordances of the teaching platform." Nonetheless, she considered VSCMC teaching as "a good idea" due to her personal growth as an educator, such as her "abilities to search for resources." When conversing about lesson planning, she primarily stressed how she promoted independent learning skills through student-individual activities. In alignment with her goals, she planned her lesson, such as the choice of "authentic materials." Her lesson planning aligned with her pedagogical beliefs. Her belief affected her lesson planning. For example, she had to "stretch three classes" in a face-to-face setting "to four or five classes" to achieve same goals.

### **The Case of Brandie**

#### *Pedagogical Beliefs towards VSCMC*

Brandie conceptualized the teacher-centered approach as teacher-directed "teaching," indicating "...students are not the center of the class while teachers lead and monitor the class." In contrast, a student-centered approach would align with "students' needs, preferences and cognitive characteristics."

Although Brandie preferred the latter, she perceived that the combination of both approaches was best practices for VSCMC teaching "due to the limitation of time and technology...which could assure the achievement of learning goals and meet the parents' expectations." More specifically, her teaching platform only allowed her to see six students at a time. She could not see the other students, resulting in the impossibility of engaging in student-student activities.

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Given the technological constraints, Brandie worked to integrate both approaches, thereby maintaining teaching efficiency. She initiated her classes with a teacher-centered approach, which she claimed was critical. She explained, "I spent twenty minutes of the class in teaching the content...[and] helped the students to consolidate the knowledge with controlled practice."

Meanwhile, Brandie accommodated students' needs, interests and prior knowledge through carefully choosing appropriate content. She elaborated:

First, students learn things they are interested in. I need to stimulate their interests in learning so that they can learn consistently. I can achieve this by introducing interesting and relevant items to the students. If the class is not relevant to the students' daily life, it can be hard for the students to discern the knowledge and structure. In addition, I can teach more effectively through eliciting from what is known by the students and attaching relevant knowledge to their prior knowledge base. Accordingly, students can be stimulated to attain better results by building connections and using divergent thinking.

### *Self-Efficacy Beliefs towards VSCMC*

Before teaching in an online setting, Brandie had incorporated an interactive whiteboard in her class. She found many similarities between the interactive whiteboard and the online teaching platform. She pointed out:

...in the face-to-face class, we have an interactive whiteboard, which allows us to click and drag. So, I do not think there is much difference [in an online setting]. The only minor difference is that we now use a mouse rather than our fingers.

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Brandie's previous experience with technology smoothed her transition to teaching in a VSCMC setting. As such, she contended that she was very competent in using the teaching platform to teach ESL students:

I am fairly good at it. It is easy to use...Because I have used the interactive whiteboard for a long time, which has a lot of similar functions as the teaching platform. Besides, I have accumulated experience experimenting on the teaching platform. Also, we have done a lot of pre-tests of the platform to ensure the teachers and students a smooth transition to the online teaching platform...

Additionally, Brandie's self-confidence also stemmed from her "successful" teaching outcome according to her high "retention rate."

### *Value Beliefs towards VSCMC*

In the interview, Brandie indicated both challenges she faced and benefits she perceived throughout her teaching experiences (See Appendix D).

First, Brandie appreciated the convenience of the teaching platform she used to teach, in that she could "use the same courseware as before" as well as review "video record" in the platform. However, she argued that the teaching platform also limited student-teacher interaction. She suggested that "eight students would be more appropriate for online learning." Accordingly, she could have "adequate interaction with students". Meanwhile, she acknowledged the significance of student-student interaction. However, she stated VSCMC teaching "cannot achieve this goal for now".

Second, Brandie stated that VSCMC teaching promoted the communication between

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teachers and students/parents through the embedded “comment” feature in the teaching platform. Specifically, she illustrated, “the teaching platform will ask students to rate the class and write short comments, such as their feelings of the class, understanding, and confusions.”

Third, some children without self-discipline might need accompany during the class. Furthermore, Brandie suggested that VSCMC teaching added more obstacles to teaching management. She discussed the challenges of teaching older students in her class:

...some older kids might pretend to study, but they are actually not...One day, I noticed that the camera of a kid only showed the flowerpot. When I asked him to respond, he could respond me. But I could not see him. After that, I noticed he was actually playing video games.

Given the challenges she was confronted with, Brandie argued that VSCMC teaching could not be a panacea. She held that the overall efficiency was lower than face-to-face teaching. She was unable to "attend to each student's individual need when teaching online." She also believed that the student engagement and effectiveness of assessment entailed more improvement. When making decisions, parents should consider their children's individualities.

Although Brandie discussed pros and cons of online teaching, she tended to embrace future changes brought by technology. She argued that VSCMC could be “a good idea”,

It allows some families and students to make full use of their time. It breaks the restriction of time and space. It offers more opportunities...It also adds more flexibility to our schedule, such as making up lessons...Online teaching is an indispensable part of the internet era. For example, during the pandemic, students in big cities can still achieve

good scores in the high-staking tests. One of the reasons is that they can learn in an online setting.

### *Lesson Planning*

During the interview, Brandie elaborated on how she planned her lesson (See Table 11).

**Table 11**

#### *Brandie's Lesson Planning*

	What	Why
Learning Objectives	I learned about the learning objectives developed by the school writers. I focused on interests and language exposure for younger students, knowledge and skills for older students, grammar and vocabulary embedded in reading instructions, and students' oral output.	Curriculum developers of the school developed curriculum based on students' interests, cognition and needs.
Content and Materials	I used comprehensive English textbook chosen by the school. I employed interactive flash games developed by the school. I added English songs and cartoons.	The curriculum team developed the curriculum, including the choice of textbook and designing interactive games. I should address students' interests by adding supplementary materials that are popular among students.
Teaching Methods	I used skill-based instructions. I used English as the medium of teaching. I began with students' presentation. Then, I introduced the topic by sharing songs or cartoons. I presented the content based on students' prior knowledge. I used 1-on-1 or 1-on-group output (e.g., role play). I used flash games for practice vocabulary and grammar.	Teachers need to follow the curriculum, namely the teaching procedure developed by the curriculum writers. My students are competent in English communication. Teachers also need to expand knowledge and offer students opportunities to present. Teacher-centered lesson delivery is essential. Teacher-student interaction is more appropriate due to the technological constraints. Teachers should differentiate instructions based on students'

		levels.
Assessment	I evaluated students' outcome in line with their performances throughout the class. I used pretest and posttest to assess students' understanding. Other students could react to the student's work by negotiation and justification. Students had an opportunity to comment on teacher's class in the end of the class.	Pretest aims to check if the students have finished their homework and their previous knowledge. The posttest focused on the content discussed today. The teaching platform will ask students to rate the class and write short comments, such as their feelings of the class, their understanding, and their confusions, which is an alternative assessment for the lesson that the teacher can take advantage of to refine the lesson plan.
Technology	I used courseware, annotation, videos, rewarding system, and Flash games.	I should interact with students and share the teaching content.

On the one hand, Brandie should follow the standardized curriculum developed by the school. She perceived that the school curriculum for younger learners focused on interests and language exposure, while the curriculum for older learners focused on knowledge and skills. Her school developed "a comprehensive English course, which highlight[ed] grammar and vocabulary learning." Based on her understanding and the school curriculum, therefore, she would focus on core skills and oral output.

Aligning with her teaching objectives, Brandie chose teaching procedures that were similar to her face-to-face teaching. When planning her lesson, she took advantage of students' prior knowledge. She suggested that "individual reflection and whole-class discussion" were more appropriate in VSCMC classes. Moreover, she integrated teacher-guided presentations with teacher-student activities.

On the other hand, Brandie made adjustments regarding the teaching objectives and content. She offered students opportunities to learn beyond the textbook. She highlighted the

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consideration of students. She insisted on "English as the medium of teaching" because of her students' English competencies. She asked her students to create thinking maps and present them in the class. In her account, she shed light on how she differentiated her instructions to address students' different levels. Brandie discussed two types of teaching assessments, namely "teacher-assessment and peer-assessment." In her class, she incorporated both pretest and posttest. The former concentrated on checking homework and assessing students' prior knowledge, while the latter emphasized the objectives of the class. She mentioned, "I asked them, for example, to record their sentences in the app."

Moreover, Brandie talked about the technological factors. Her school developed the teaching platform that resembled the functions of the interactive whiteboard, which allowed her "to insert courseware, annotate, play videos, and reward students." Besides, her school integrated flash games developed by the curriculum designers into the teaching platform. Among all the other functions, Brandie preferred the rewarding feature, which was "very attractive and appealing."

Brandie recalled how she made decisions during the lesson planning process:

The teacher makes decisions on which segment to use, and which is not incongruent with the student's characteristics and preferences. However, teachers cannot steer away from the learning objectives integrated into the textbook and syllabus. Teachers can develop varied activities and assessment tools, but the learning objective is the root. Specifically, teachers can add or strengthen the objectives. But they are not supposed to delete or change any objectives. The syllabus and course are designed in alignment with the

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students' characteristics and needs. So, teachers need to conform to the syllabus and make adjustments on the condition that the students have mastered the basics in the textbook.

### ***Beliefs and Lesson Planning***

Finally, Brandie discussed how her beliefs influenced her lesson planning:

When I planned my lesson, I had my beliefs. I understood that I had to teach online, which might bring me some challenges. I kept a positive attitude towards it so that I tried my best to teach in an online setting. I considered how I could take individuality into account while assuring the achievement of the overall learning objectives. I considered students of different levels. I understood the benefits of online teaching. Meanwhile, I also faced challenges...I understood that some work needed to be done before the presentation. For example, they needed to finish their thinking map before the presentation. It is unlike the face-to-face class that they can finish the thinking map during the class.

### ***Summary***

Brandie preferred a student-centered approach, which allowed her to accommodate "students' needs, preferences, and cognitive characteristics." Given the technological constraints (e.g., unable to see all the students), however, she incorporated both student-centered and teacher-centered approaches. She believed the combination of both approaches was more appropriate in VSCMC settings. Specifically, she chose to "teach the content" to maintain teaching efficiency while, to the utmost, accommodating students' needs through "eliciting from what [was] known by the students." Moreover, Brandie had strong self-efficacy towards teaching EFL students in

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VSCMC settings by claiming, "I am fairly good at it." Her confidence was rooted in her previous experience with interactive whiteboards and a high retention rate. The teaching platform developed by her school was similar to the courseware in the interactive whiteboard. Besides that, Brandie valued promoted "communication with students," and convenience brought by VSCMC teaching, whereas she found "the limited student-student interaction" was problematic. Overall, she valued VSCMC as an additional resource for EFL students in China. Given her school regulations, she should follow the standardized curriculum, including learning objectives, textbooks, and activities. Meanwhile, she also made adjustments, such as sharing additional learning materials, inviting students to deliver oral presentations, and differentiating her instructions based on students' levels. She reported that "[w]hen I planned my lesson, I had my beliefs." Her account of lesson planning was in line with her pedagogical beliefs, in that she blended teacher-centered approaches and student-centered approaches. Her value belief and self-efficacy belief also impacted her choice of teaching methods and activities.

### **Cross-case Analysis**

This multiple case study examined the impact of teacher beliefs towards VSCMC on lesson planning. The cross-case analysis compares the six cases in the current study. Drawing insights from each case, the cross-case analysis builds a holistic understanding of the collective impacts of teachers' beliefs about VSCMC on lesson planning. In doing so, the conceptual framework guided the cross-case analysis through offering key themes, namely pedagogical beliefs, self-efficacy beliefs, value beliefs, and lesson planning. Each theme was supported by the evidence from how each participant made sense of it. The findings of the cross-case analysis addressing

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the research question are as follows:

How do EFL teachers' pedagogical beliefs, self-efficacy beliefs, and value beliefs about VSCMC influence their lesson planning?

### ***Teacher Belief towards VSCMC***

**Pedagogical Beliefs.** All participants held combined teacher-centered and student-centered beliefs. Lynn, Yinko, Ariel, and Brandie agreed on the integration of the teacher-centered approach due to technical constraints. Specifically, Lynn claimed that she could not employ the student-centered approach with a class of more than two students due to the fact that the students were too young. Given the lack of physical coexistence, Ariel and Brandie further demonstrated that it would be impossible to conduct kinesthetic activities and student-student interactions. Andy and Lynn both indicated that they began with a teacher-centered approach, which aimed at gradually releasing the power. Andy suggested that a teacher-centered approach could offer beginners more language input. Yinko and Brandie agreed that it would be more efficient to incorporate teacher-centered approaches with the fixed curriculum.

**Self-Efficacy Beliefs.** All participants were confident in using the teaching platform to teach EFL students. Their confidence came from their rich experience with the teaching platform. Meanwhile, five participants expressed their challenges with the teaching platform. Yinko and Ariel faced the challenges of manipulating the teaching platform as well as the students. Brandie expressed her concerns regarding classroom management with older students, who might play video games and pretend to listen. ChrisLeeson argued that teachers had no control over students while teaching online. Ariel felt powerless when students had technical

troubles at their sides.

When evaluating their online teaching, five out of six participants were confident. Chris Leeson and Brandie referred to the high retention rates of their classes. Since Yinko considered herself as an experienced and responsible teacher, she was confident with her teaching. Lynn argued that her teaching succeeded in enhancing students' oral communication. However, she claimed that her teaching was not successful because VSCMC teaching was incomplete due to the absence of physical interactions and activities. Ariel was also satisfied with her teaching, whereas she thought she needed more improvements. In contrast, Andy was not confident due to his lack of experience with teaching more than one student in VSCMC settings.

**Value Beliefs.** All participants appreciated the benefits of VSCMC teaching, such as its flexibility, extra resources, and exposure to technology. Meanwhile, all participants acknowledged that students had shorter attention spans, and the integration of technology could be problematic, such as the obstacles of classroom management. Moreover, all participants reached an agreement that the teaching efficiency of VSCMC was lower when compared with face-to-face teaching.

However, Lynn indicated that it would be unfair to compare VSCMC with face-to-face learning because VSCMC served only part of teaching and learning needs. Lynn analogized VSCMC as industrialization upgrading. Specifically, VSCMC only updated part of the production line, whereas face-to-face teaching was the whole production line. Andy and Brandie also believed that teaching in VSCMC contexts was not complete due to a lack of student-student interactions.

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Participants disagreed with each other regarding individualized teaching. Lynn and ChrisLeeson argued that the small-scale classes could individualize teaching. Although Ariel enjoyed teaching with smaller groups, she thought VSCMC failed to accommodate students with special needs. Yinko agreed with Ariel on this point and added that VSCMC was far from individualization.

Albeit those disputes, all participants perceived that VSCMC could be a good idea. Lynn noted, "online teaching is just one of the dishes, but you cannot count on it to resolve all the problems." Other participants were also resonated with this viewpoint. They tended to look at the brighter side of VSCMC teaching, in that it was more like an add-on option without decreasing the traditional face-to-face teaching.

### ***Lesson Planning***

All participants discussed the varied extent of employing a pre-developed curriculum or content. Four participants mentioned that their schools would design the curriculum for them. Accordingly, they needed to learn about the objectives, content, and activities. Lynn, ChrisLeeson, and Brandie argued that their schools' curriculums were trustworthy, in that curriculum designers referred to English Standards (e.g., CEFR), students' cognitive developments, and parents' expectations. They believed that teachers should not change the learning goals or content in the curriculum. Though not adopting a ready-made curriculum, Yinko, Ariel, and Andy chose readers and textbooks from American publishers rather than developing the content by themselves. Yinko and Ariel suggested that languages used in books developed by native speakers could be more authentic and accurate. Ariel developed the teaching

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objectives in reference to Common Core State Standard. Meanwhile, Andy designed his teaching objectives in alignment with the higher-order questions at the back of the readers.

Albeit adopting ready-made curriculum or materials, all participants would make adjustments in line with their students, previous experience, and knowledge. With regard to students, they considered students' preferences, levels, and ages. First, Lynn and Yinko argued that teachers needed to consider students' preferences and interests. Specifically, Lynn, ChrisLeeson, and Brandie added aural and visual elements, such as cartoons and songs, that interested the students.

Second, Lynn and Brandie believed that objectives should be in line with students' levels in that they implemented differentiated instructions. For example, Lynn added more objectives for fast learners and recapped learning objectives that were not achieved in previous lessons. Besides, Brandie reflected that she used English as the medium of teaching because her students were competent in English communication. She presented the content based on students' prior knowledge. Yinko added that test time should depend on students' levels.

Third, ChrisLeeson and Brandie believed that learning objectives should be based on students' ages. That said, ChrisLeeson believed objectives were primarily listening and speaking at the elementary level and writing objectives for students older than seven years old. Ariel agreed that writing should not be overemphasized when the students were too young. Brandie focused on students' interests and language exposure for younger students, and knowledge and skills for older students. Yinko designed simple games for young children, and group activities for older students.

Moreover, participants made decisions on different teaching models. ChrisLeeson followed the PPP model (i.e., present, practice, and produce), which he believed was very efficient. Andy conformed to the PWP model (i.e., prior reading, while reading, and post reading) and employed scaffolding to promote learning autonomy. Ariel and Brandie agreed that teachers needed to expand their knowledge and offer students opportunities to practice the language. Correspondingly, they both asked their students to develop a topic and present it during the class. They suggested that bi-directional assessment could be critical. They orally assessed their students and reflected on students' feedback at the end of the class. Brandie added that students could benefit from reacting to the student's work by negotiation and justification. Hence, she had the students give comments on each other.

When planning their lessons, they made adjustments regarding the technological factors, including the features and constraints. Concerning the use of teaching platforms, all participants considered both teaching and learning. They all discussed fundamental features of their teaching platforms, such as video, audio, screen sharing, and annotation. They used them to present their content, including sharing their slides, predeveloped activities, and multimedia resources. Lynn replaced realia with multimedia resources, which she believed was more appropriate for VSCMC contexts. Yinko and Lynn indicated that, if applicable, they reverted face-to-face activities into online versions.

Moreover, all participants engaged the students with different features. For example, they asked students to annotate on the screen. ChrisLeeson developed slides based on screenshots. Ariel and Brandie used interactive courseware to engage students. Andy used selectors to

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stimulate students. Brandie used Flash games to practice vocabulary and grammar. She was also in favor of a rewarding system, which was attractive to students. In addition, Lynn, Ariel, and Yinko suggested that formative assessment could be appropriate for the platform could document students' progressive learning trajectories. For example, Yinko integrated running records, including vocabulary, reading comprehension, reading fluency, and grammar. Brandie and Ariel indicated that they could receive students' feedback on the platform. Specifically, Brandie recalled that the teaching platform allowed students to rate the class and write short comments, such as their feelings, understanding, and confusions, which was an alternative assessment for the lesson that the teacher could take advantage of to refine the lesson plan.

### ***Beliefs and Lesson Planning***

**Teachers' perception.** All participants argued that their beliefs guided their lesson planning. Specifically, ChrisLeeson argued that his beliefs "define[d]" his lesson planning. Lynn and Ariel indicated that their beliefs gave them hypotheses of what might work in their classes. Subsequently, those hypotheses helped plan their lessons. Brandie and Yinko's self-efficacy and value beliefs guided them to have a positive attitude towards challenges. Given their perceptions of VSCMC teaching's benefits and drawbacks and her capability of teaching, Andy and Brandie could make better decisions on activities in lesson planning.

**Consistency.** All participants' lesson planning illustrated the consistency between their beliefs and lesson planning. First, the pedagogical beliefs influenced lesson planning. When making decisions on learning objectives, all participants considered their students, such as their levels, preferences, and needs, which aligned with their student-centered pedagogical beliefs.

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Four participants chose teaching content and materials that served their student-centered beliefs. Andy and Ariel decided on materials to cultivate independent learners. Moreover, Lynn and Yinko believed that teaching content should be relevant to students' daily life and communications. Three participants designed teacher methods guided by their student-centered beliefs. Andy scaffolded students' learning, while Brandie and Ariel offered students to research and report their learning.

In alignment with teacher-centered belief, all participants adopted, though to a different extent, the ready-made curriculum. Meanwhile, five participants clearly mentioned that some activities were teacher-controlled in line with their teacher-centered pedagogical beliefs.

Moreover, all participants developed learning objectives that were best suitable, though differently, for VSCMC instructions, showcasing their value beliefs and self-efficacy beliefs. Since they had confidence in their VSCMC instructions, they integrated different features (e.g., annotation, interactive whiteboard, and games) in their teaching. Their value belief motivated them to continue to teach in VSCMC contexts.

**Inconsistency.** Five participants displayed some inconsistencies between their beliefs and lesson planning. Lynn argued that teacher-centered approaches was more appropriate in VSCMC settings. In contrast, her choices of learning objectives, materials, and activities were all compatible with student-centered beliefs through the consideration of students' ages, levels, and interests. ChrisLeeson argued that he was a true believer in student-centered beliefs. However, he would employ the PPP model, which was against his student-centered beliefs. Although Yinko expected to integrate student-centered activities, she only exemplified teacher-directed games,

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such as guessing games and spelling games. In Andy's case, his ultimate goal was to promote independent learning. Nonetheless, his learning objectives only referred to the ready-made materials without adjustments, namely the higher-order questions at the back of the readers. That said, his goal development was not entirely in agreement with his student-centered belief.

Brandie argued that her class consisted of both teacher-centered and student-centered sessions.

When elaborating the student-centered sessions, however, she would involve teacher-directed activities such as grammar and vocabulary exercises.

### *Summary*

All participants perceived that the best practice in VSCMC was the combination of both teacher-centered and student-centered methods, displaying their mixture of both pedagogical beliefs.

Given their experience with technology, they all had strong self-efficacy beliefs in using technology to teach. Despite the technological challenges and lower teaching efficiency, all participants held a positive value belief towards VSCMC, in that VSCMC was viewed as an add-on option without decreasing the traditional face-to-face teaching. Moreover, all participants planned their lessons differently regarding learning goals, the choice of teaching content, and methods. Besides, all participants perceived that their teacher beliefs impacted their lesson planning. Based on the analysis, it is suggested that their lesson planning demonstrated both consistency and inconsistency with their pedagogical beliefs. Both their value beliefs and self-efficacy beliefs motivated them to teach and solve problems in VSCMC contexts.

The next chapter will present the discussion of the findings related to pertinent literature.

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## Chapter 5: Discussion

The present study explored the impact of Chinese EFL teachers' beliefs about VSCMC on lesson planning. The findings offered insights on how teacher beliefs might influence lesson planning. This chapter will discuss the findings by relating them to the previous literature and reflecting on the impact of teacher beliefs on lesson planning. The findings of the cross-case analysis will be interpreted in line with the research question:

How do EFL teachers' pedagogical beliefs, self-efficacy beliefs, and value beliefs about VSCMC influence their lesson planning?

### Teacher Belief towards VSCMC

#### *Transitional Pedagogical Beliefs*

Teachers possess different extent of both student-centered and teacher-centered beliefs (Tondeur et al., 2008; Sang et al., 2010). The findings depicted that all participants combined teacher-centered approaches and student-centered approaches in VSCMC contexts. However, their choice of a teacher-centered approach was due to the technological constraints and their consideration of teaching efficiency. Although many studies suggest that technology supports teacher varied pedagogical beliefs, VSCMC, the network-based communication in video mode (Murray, 2000), might have limited capability to corroborate student-centered approaches. Accordingly, their pedagogical beliefs towards face-to-face teaching and VSCMC teaching were different.

#### *Strong Self-Efficacy Beliefs*

The study shows that all participants have strong self-efficacy in using technology to teach EFL

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young learners in VSCMC contexts. The participants had strong confidence due to their ample experience with technology (Birisci & Kul, 2019; Codreanu & Celik, 2013; Tilton & Hartnett, 2016). Their strong efficacy motivated them to take risks in teaching (Fuchs et al., 2007; Gibson & Dembo, 1984), resolve problems in teaching (Ertmer et al., 2006), and use technology more effectively (Enochs et al., 1993; Wang et al., 2004).

### ***Complexed Value Beliefs***

All teachers held a positive perceived value about VSCMC. If applicable, they expressed their willingness to consistently teach in VSCMC settings, aligning with the findings in previous research (Buquoi et al., 2013; Funkhouser & Mouza, 2013; Kimmons & Hall, 2016). However, the current study shows the technological constraints may cause troubles (Baralt & Morcillo Gomez, 2017; Wang, 2006), leading to low teaching efficiency in VSCMC contexts. Expressly, the findings confirm EFL students' shorter attention span in VSCMC classrooms (Setyaningsih, 2007; Stickler & Shi, 2015) due to lack of physical activities and interactions. Therefore, the findings were not in line with the conclusion of the metanalysis (Ziegler, 2016) that SCMC is slightly more interactive than face-to-face teaching. This discrimination might lie in the different age groups of the students. Specifically, the metanalysis included only adult learners, while the current study was about young learners who need kinesthetic activities and five senses to learn. As such, teachers might have limited choices of activities and encounter challenges in assessing understanding (Guichon, 2009; Guichon, 2010). Meanwhile, their collective argument was to view VSCMC teaching as an add-on option. In other words, they still assumed that face-to-face learning was indispensable in accommodating the diverse needs of children.

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## Lesson Planning

All participants planned their lesson differently due to numerous external factors (e.g., school policies, student characteristics, class scale, and technological affordances) (Ertmer, 1999; Van Praag & Sanchez, 2015). First, teachers followed their school policies during lesson planning. Three participants followed pre-designed lessons, while the other three designed learning objectives and chose methods based on the pre-designed teaching content. All participants considered students' characteristics in their lesson planning. For example, the findings confirm that teachers may not see students' facial expressions and body language (Lee et al., 2007). More precisely, some students were too young to be aware of the camera's position, while others may not even turn on their cameras due to technical reasons or unwillingness.

Second, the choice of approaches aligned with the student age. Teachers who taught older students used a more student-centered approach, such as researching and presenting. In contrast, teachers who taught younger students primarily employed the teacher-controlled practice.

Third, teachers developed different methods in line with the class scale. The teacher with one-on-one class had more individualized learning objectives and scaffolding. Teachers who taught one-on-group adopted more peer interaction and teacher-controlled activities.

Due to the reported limitations of technology (e.g., weakened physical activities and limited choices of features), participants planned their objectives and activities based on the features of their teaching platform. For example, this research pointed out that teachers' demonstrations, such as total physical response, a common practice in EFL classes, were weakened. As such, teachers would add more multimedia resources rather than their physical

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demonstration. Besides, all participants highlighted technical and internet problems (Lee, 2009), resulting in both learners' (Hampel & Stickler, 2005) and teachers' anxiety. Teachers could not avoid such problems in their lesson planning.

### **Teacher Beliefs towards VSCMC and Lesson Planning**

Teacher beliefs explicate the differences in planning technology integration (Prestridge & de Aldama, 2016; Tondeur et al., 2016). The research shows that teacher beliefs guide teachers' decision-making in lesson planning (Chan & Lam, 2003; Kagan, 1992; Pajares, 1992) and their use of technology (Ertmer, 2005; O'Neal et al., 2017). Specifically, the participants chose appropriate content and materials based on their pedagogical beliefs (Chan & Lam, 2003; Kitsantas & Baylor, 2001; Moallem, 1998), such as authentic materials chosen by Ariel, Yinko, and Andy, learning content chosen by ChrisLeeson, and learning goals chosen by Lynn and Brandie. Meanwhile, teachers' teacher-centered and student-centered approaches are supported by their pedagogical beliefs (Overbay et al., 2012). For example, Lynn, Yinko, and Brandie believed a teacher-centered approach was more efficient, thereby adopting teacher-directed activities. Ariel valued the student-centered approach, which informed her inquiry-based activities.

Besides, teachers perceived self-efficacy beliefs also influence their teaching practice (Liu et al., 2017). All participants had a high level of self-efficacy in using technology to teach EFL young learners in VSCMC settings, which predicted their teaching practice (Abbitt, 2011; Kwon et al., 2019; Teo et al., 2018;). For example, Brandie would use the teaching platform the same way as she employed the interactive whiteboard, for both tools shared similar features.

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ChrisLeeson interacted with the student by using multiple features, which he was completely capable of using.

Teachers' perceived value beliefs also informed their teaching practice (Chaaban & Ellili-Cherif, 2017; Miller et al., 2003; Wigfield & Eccles, 2000). Before teaching in VSCMC contexts, teachers made value judgments (Zhao et al. 2002) that it could be the trend of EFL teaching. They valued VSCMC teaching for its add-on opportunities for children to attain language exposure. As a result, they started to teach in VSCMC settings.

With the understanding of the benefits and downsides of VSCMC teaching, teachers would make appropriate decisions on lesson planning (Ottenbreit-Leftwich et al., 2010). Teachers planned their lessons based on their favorite features. ChrisLeeson developed slides based on screenshots. Ariel and Brandie incorporated interactive courseware to engage students. Andy employed selectors to stimulate students. Brandie integrated Flash games to consolidate students' vocabulary and grammar.

Besides, teachers may rule out activities based on the disadvantage of VSCMC teaching (Ottenbreit-Leftwich et al., 2010). Because of the long-distance, Lynn would not involve too much kinesthetic movement, such as jumping and running. Since it is difficult to make judgments about students' understanding due to the dim view of the camera, Lynn suggested that monitoring reading and writing would be difficult and time-consuming.

On top of consistency (Ding et al., 2019; Kuzborska, 2011), the current research also demonstrated inconsistency (Borg, 2003) between teacher beliefs and lesson planning. The differences mainly lie in their pedagogical beliefs and lesson planning. The inconsistency may be

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caused by external factors (Borg, 1999; Duffy & Anderson, 1984; Taimalu & Luik, 2019). As the lesson planning section discussed, teachers had divergent lesson planning affected by their students, school policy, class scale, and technology. For example, four teachers argued that they could not engage students with student-student interaction due to distant learning. As such, they had to figure out alternative teacher-centered activities.

Moreover, their differences in teacher education may also result in inconsistency (Deal & White, 2006). According to Deng et al. (2014), teacher-centered beliefs refer to that teachers act as experts to supervise the learning process, while student-centered beliefs capitalize on the learners' needs and interaction. All participants reached an agreement on teacher-centered beliefs. However, their student-centered beliefs were distinctive. Lynn and Andy admitted that the ultimate goal of teaching was to achieve the students' learning autonomy. Lynn and ChrisLeeson believed that a student-centered approach was able to individualize teaching and learning. Ariel and Brandie considered student-student interactions as the student-centered approach. ChrisLeeson, Ariel, and Yinko highlighted the students' positive affections, namely students were interested and felt safe. As such, their lesson planning might align with their reported beliefs but contradict the theory.

## **Summary**

This chapter discusses the findings of the current research. Specifically, teachers held transitional pedagogical beliefs due to technology constraints of VSCMC teaching. Teachers' rich experience with technology promoted their self-efficacy belief. Teachers' complexed value beliefs came from their teaching practice and reflections. In addition, their lesson planning was

affected by both external factors and internal factors. As they reflected, their teacher beliefs guided their lesson planning processes. In essence, their lesson planning demonstrated consistency with their teacher beliefs, closely related to the previous literature. However, inconsistency between teacher beliefs and lesson planning was also noticed due to external factors.

Next, I will conclude the thesis and discuss the implications and future research.

## Chapter 6: Conclusion

This study explored the impact of Chinese EFL teachers' beliefs about VSCMC on lesson planning. In this chapter, I will first summarize the research. Then, I will discuss my gains and reflection through conducting this research. Following this, I will further demonstrate the implications and limitations of the study. Finally, I will present the recommendations for teaching practice and future research.

### Summary

Technological advancements have altered our means of communication (Kern, 2006) as well as EFL Education (Wei, 2018). Accordingly, VSCMC has been applied in EFL education for young Chinese learners. However, VSCMC is insufficiently studied in the field of EFL education for young learners. Meanwhile, the VSCMC context is distinctive from the face-to-face context in many aspects (Wang & Chen, 2012), resulting in bringing numerous challenges to teachers in planning for technology (e.g., Baralt & Morcillo Gomez, 2017; Guichon & Cohen, 2014; Stickler & Shi, 2015).

Given the uniqueness of EFL young learners (Setyaningsih, 2007) and influence of teacher beliefs on lesson planning (Basturkmen, 2012; Kagan, 1992; Pajares, 1992), it is imperative to explore how Chinese EFL teacher beliefs about VSCMC with young learners would impact lesson planning. Accordingly, qualitative multiple case study was chosen to best answer the how question. Six participants were interviewed in the study.

The results indicated that teachers had transitional pedagogical beliefs partially due to technological constraints. Besides, the participants had strong self-efficacy beliefs because of

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their adequate exposure to VSCMC teaching platforms. Moreover, they held a complex value belief towards VSCMC teaching. Numerous variables (e.g., school policy, student characteristics, class scale, and technological affordances) interplayed with their lesson planning process. Their perceived beliefs motivated them to teach in VSCMC settings and assisted the discussion-making process of lesson planning regarding learning objectives, teaching content, and teaching methods.

### **Personal Reflections**

Thanks to this research project, I could have an opportunity to reflect on my teaching while listening to different voices. Before this research, I believed that teacher-centered and student-centered beliefs should be black and white. However, I now understood that we could blend them based on varied contexts. I was so used to the teaching platform that I had been using. This research allowed me to learn more exciting features, such as authorization, rewarding system, and ongoing assessment record. After categorizing the pros and cons of VSCMC, I realized that I had never thought about it such profoundly regarding the perspectives from teaching, learning, managing, and parenting.

After delving into disparate beliefs, I could apply more ideas when planning my lessons. For example, I would be more explicit about why I made decisions on certain activities or objectives. I also reevaluated the use of Mandarin in VSCMC teaching. I used to assume that English Only policy could be the most efficient. However, I learned that I needed to reconsider it in alignment with my students' needs. I would also consider students' affective factors as one of the primary concerns in my teaching, which I had previously neglected. I built a more detailed

understanding of VSCMC teaching, which enabled me to be more certain about my beliefs and teaching practices. Therefore, I aspired to share the current research with more teachers to benefit their teaching practice.

In addition, I cannot entirely agree with the standardized curriculum shared by the participants. Specifically, some participants argued that teachers were not allowed to change the curriculum. I assume the standardization fails to accommodate teachers' and students' needs. Each classroom can be different. Without acknowledging the difference, EFL education is not successful. According to the post method approach (Kumaravadivelu, 2001), teachers should have their voices in producing knowledge and theory. Teachers should collaborate with students and parents to individualize their trajectory of teaching and learning.

### **Implications**

This study has both practical and theoretical implications. Regarding practical implications, understanding teacher beliefs would be conducive to teachers, teacher training, and teaching platform development. First, this research is urgent and timely since the post-COVID-19 era also entails teachers capable of teaching online. EFL teachers should be prepared for the ever-changing world. The teacher can benefit from understanding the impact of their beliefs on lesson planning. That said, teachers should revisit their beliefs and how their beliefs influence their planning in VSCMC settings. The six cases in the current study would act as references for teachers during the process of reflection. If applicable, teachers should largely implement a student-centered approach through scaffolding. As such, teachers' lesson planning will be more purposeful to enhance student performance and teaching efficiency. To do so, teachers need to

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understand their capability of using technology and the needs of different stakeholders, such as students, parents, and the school. Teachers also need to improve their self-efficacy and value beliefs through frequent uses of technology (Tilton and Hartnett, 2016) and receiving pertinent techopedagogical education (Birisci & Kul, 2019). Since knowing is inseparable from actions (Davis et al., 2015), teachers should reflect on their practice to gain improvement (Galea, 2012).

Second, teacher trainers should be aware of teacher beliefs to better prepare the pre-service teachers. Specifically, teacher trainers should not only focus on pedagogies but also showing examples to teachers to gain their value beliefs. Besides, teacher trainers need to address pre-service teachers' diverse needs. Some teachers may focus more on teacher-centered approaches with keeping in mind that the student-centered approach is the goal. Meanwhile, teacher trainers should engage pre-service teachers with hands-on activities and help them gain self-efficacy through successful experience (Birisci & Kul, 2019).

Third, teaching platform developers should acknowledge teachers' beliefs. They should develop customized tools for teachers to use. For example, participants are confronted with challenges in student-student interaction and managing the classes. Developers may enable teachers to supervise different breakout groups at the same time. Besides, a teaching tool app store might be integrated into the teaching platform for a better learning experience. Under parents' consent and authorization, teachers may remotely control students' cameras and microphones to eliminate classroom management difficulties.

Regarding theoretical implications, this research fills the gap of understanding VSCMC in the field of EFL education for young children. The current study echoed with previous

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research with regard to teacher beliefs (e.g., Funkhouser & Mouza, 2013; Tilton & Hartnett, 2016; Tondeur et al., 2008;) and their impacts on lesson planning (e.g., Kagan, 1992; Prestridge & de Aldama, 2016; Tondeur et al., 2016). Moreover, it offers a detailed account to support previous findings. Given the characteristics of young learners, this research disagrees with some research with adult learners (e.g., Wang, 2006; Yen et al., 2015; Ziegler, 2016).

### **Limitations**

The first limitation concerns the research context. Specifically, the study only recruited Chinese EFL teachers from different commercial schools in Beijing. Since this study assumes that experienced teachers are more explicit about their beliefs, teaching experience becomes the prioritized criteria. Besides, the use of qualitative study was by no means of pursuing generalizability. Instead, a detailed description allows readers to evaluate the transferability of the findings (Creswell, 2014).

This research was inspected exclusively into VSCMC. The research did not include other modes of computer-assisted language learning or blended learning of online and face-to-face contexts. The rationale for this focus was that language teaching happened only with the benefit of VSCMC learning. Therefore, this research intended to isolate the language learning that could take place in VSCMC alone.

Case studies often rely on multiple sources of data (Creswell, 2014). Data was exclusively collected through interviews. It did not include other sources of data, such as documents, observation, and video recording. For example, the teacher reported lesson planning might be different from their authentic lesson planning (Peterson et al., 1978). Evidence from the

classroom was not included due to the difficulty in obtaining parental permission during the pandemic and the length of the master's project.

My experience as an EFL online teacher might be another limitation, which may impact the process of data collection and interpretation. I first bracketed out my previous experience (Creswell, 2014). Then, I used the member check to maintain the originality of the participants' ideas. Next, I employed interrater reliability to validate my transcription and translation. Finally, loads of verbatim were cited to assure authenticity. Meanwhile, I have more research ideas based on my research findings, which could be explored in the future.

### **Future Research**

This research explored Chinese EFL teacher beliefs about the application of VSCMC in teaching young learners. Further research might be done in other contexts, such as Canada, and other language education, such as French as a second language. Besides, this study only inspects the synchronous portion of EFL education. Further research might explore asynchronous EFL education and the blended learning of both synchronous and asynchronous teaching.

This research only adopted interviews as the primary data source. Future research may collect data from other sources, such as class observation, collaborative lesson planning and reflection, and survey. Future research might also focus on the development of a scale to survey teacher beliefs for VSCMC teaching.

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**Appendix A: Recruitment Email**

Dear XXX,

My name is Chuan Liu, an MA student from the Faculty of Education at the University of Ottawa. My supervisor is Dr. Douglas Fleming. I am researching to investigate Chinese EFL teachers' beliefs regarding the online synchronous context.

With the proliferation of online teaching platforms, more and more EFL teachers become intrigued by teaching EFL students online. Furthermore, the impact of Post Covid-19 promotes the development of online teaching in China. As such, I intend to interview Chinese EFL teachers in commercial schools, thereby discuss the different perspectives towards the topic.

I will conduct an in-depth interview about the teacher's thoughts and ideas. The interview will be 2 or 3 times. Each will take up around 45 minutes to an hour. If you are interested in participating in an interview with me, please contact me.

Looking forward to your reply.

Chuan Liu  
MA Student  
Faculty of Education  
University of Ottawa

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## **Appendix B: Interview Guide**

Since the teachers have rich experience in online teaching, it would be assumed that they could output sufficiently with the big questions. More relevant topics will be listed below to generate more meaningful and productive data:

### **First Interview**

-Tell me about yourself. (e.g., teaching experience, education background, certificate)

-How do you plan your videoconferencing classes? Why? (e.g., student information, learning goal, material selection, procedure, instructional strategies, classroom management, assessment, videoconferencing platform that are used to support teaching)

-What is the best way of teaching young Chinese EFL learners in a videoconferencing setting? Why? (e.g., teacher-centered approached, student-centered approaches, etc.)

### **Second Interview**

-How well do you think you can teach in a videoconferencing context? Why do you think so?

-Do you think videoconferencing teaching is a good idea? Why? (e.g., advantages, disadvantages, etc.)

-How do your beliefs influence your lesson planning?

-How do you make sense of your journey as an educator? (e.g., past, present, and future)

Other questions that you think is critical to discuss.

## Appendix C: Value Beliefs

### Benefits and Challenges for Students and Learning

Students	Pro	Con
Lynn	<ul style="list-style-type: none"> <li>-It saves commute time.</li> <li>-It offers students more opportunities to speak.</li> <li>-Good teacher resources are more accessible.</li> <li>-Students can learn to use technologies.</li> </ul>	<ul style="list-style-type: none"> <li>-It is harmful for eyes</li> <li>-Students are easily distracted and have shorter attention span.</li> <li>-Students have to sit on the chair during most of the class time.</li> </ul>
ChrisLeeson	<ul style="list-style-type: none"> <li>-Students enjoy learning due to high-quality teacher resources.</li> </ul>	<ul style="list-style-type: none"> <li>-It is harmful to eye health.</li> <li>-Some students might not properly use the computer.</li> <li>-Below level students are not very suitable due to shorter attention span.</li> </ul>
Yinko	<ul style="list-style-type: none"> <li>-It saves commuting time.</li> <li>-Students can better adapt to new technology, which is the fundamental skill of the future.</li> <li>-It allows students to learn anywhere.</li> <li>-It offers high-quality teacher resources.</li> </ul>	<ul style="list-style-type: none"> <li>-Students have shorter attention span due to psychological or biological factors.</li> <li>-Students are confronted with technical issues and manipulation of technology.</li> <li>-Some students might play computer games without supervision.</li> </ul>
Andy	<ul style="list-style-type: none"> <li>-Students will not bother each other physically, such as pushing or touching each other.</li> <li>-Students have more access to high-quality teacher resources.</li> </ul>	<ul style="list-style-type: none"> <li>-Students have to sit on a chair most of the time.</li> <li>-Students have shorter attention span.</li> </ul>
Ariel	<ul style="list-style-type: none"> <li>-Students are easy to adapt into online learning because they were born in the era of technology.</li> <li>-It is not restricted to ages and levels.</li> </ul>	<ul style="list-style-type: none"> <li>-Students have shorter attention span.</li> <li>-Students are less engaged and interested due to more focus on the teaching content rather than interpersonal interactions.</li> <li>-Students face challenges in using technology (e.g., using mouse).</li> <li>-It is not appropriate for students with special needs.</li> </ul>
Brandie	<ul style="list-style-type: none"> <li>-It offers students learning resources.</li> <li>-It offers students more language exposure.</li> <li>-It Saves time and energy for autonomous learners.</li> </ul>	<ul style="list-style-type: none"> <li>-Students have shorter attention span</li> <li>-Students are easily distracted by websites or computer games.</li> <li>-It is not appropriate for students who lack learning independence.</li> </ul>