



Castledown

 OPEN ACCESS

# Technology in Language Teaching & Learning

ISSN 2652-1687

<https://www.castledown.com/journals/tlt/>

*Technology in Language Teaching & Learning*, 4(2), 41–61 (2022)  
<https://doi.org/10.29140/tltl.v4n2.780>

## 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



CHUAN LIU<sup>a</sup>

FRANCIS BANGOU<sup>b</sup>

<sup>a</sup>*University of Western Ontario, Canada*  
chuanliu616@gmail.com

<sup>b</sup>*University of Ottawa, Canada*  
fbangou@uOttawa.ca

### Abstract

In recent years, Video-based Synchronous Computer-Mediated Communication (VSCMC) has started to be 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. Semi structured interviews were conducted with six Chinese teachers of young EFL learners. The results indicated that participants 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.

**Keywords:** VSCMC, teacher beliefs, lesson planning, EFL education, multiple case study

**Copyright:** © 2022 Chuan Liu, Francis Bangou. This is an open access article distributed under the terms of the Creative Commons Attribution Non-Commercial 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.  
**Data Availability Statement:** All relevant data are within this paper.

## Introduction

Video-based synchronous computer-mediated communication (VSCMC) refers to real-time network-based communication that takes place in video mode (Murray, 2000), and offers face-to-face communication opportunities (e.g., visual and vocal cues) that resemble real-life conversations (Hung & Higgins, 2016; Stockwell, 2010). As such, VSCMC is very much like face-to-face communication, in that interlocutors can still understand each other with visual cues (Petersen & Sachs, 2015).

The implementation of VSCMC with young Chinese EFL learners has been steadily increasing in recent years. What makes the Chinese context particularly interesting is that English plays a critical role in individuals' education and career development (Fang, 2018; Xiao, 2020). For instance, English is one of the compulsory subjects for all primary school students in China and more than 65 million Chinese primary school students learn English as a foreign language (MoE, 2019). Consequently, thousands of commercial schools have been opened in China to address the ever-increasing learning demand of EFL education, which values an early entry to learning English (Hu, 2007; Kirkpatrick, 2011). Of particular relevance for this article, many of these schools offer online language programs which are growing in popularity. As a result, the number of monthly active online EFL learners have reached 16.37 million (Jiguang, 2020).

Notwithstanding the significant growth in the number of online EFL learners, scarce attention has been paid to VSCMC with Chinese young learners (Coyle & Reverte Prieto, 2017, Yu, 2018). Specifically, numerous examples of the implementation of VSCMC in EFL teaching could be found in Chinese university settings, such as online English discussions on Zoom (Zhang & Chen, 2021), language exchange with English native speakers on Zoom (Feng & Shirvani, 2021; Sunaoka, 2018), task-based learning on university-developed platform (Li *et al.*, 2017). Besides, a variety of tools can be used for VSCMC teaching in China, such as interactive classroom (e.g., ClassIn, CCTalk), social media tools (e.g., QQ, WeChat, Skype), and remote meeting tools (e.g., Zoom) (Quadir & Zhou, 2021). Therefore, researching the context of VSCMC with Chinese EFL learners is a relevant endeavour.

Moreover, teachers, particularly for those who are not familiar with online teaching, are confronted with numerous challenges (Baralt & Morcillo Gomez, 2017), partly due to the integration of the interactive whiteboard, video, audio, and text into language teaching (Wang, 2006; Wang & Chen, 2012). For instance, teachers can have difficulties to see learners' facial expressions and body language in VSCMC settings (Lee *et al.*, 2007). These differences can also lead to divergent learning outcomes compared with face-to-face teaching (Baralt & Morcillo Gomez, 2017; Hung & Higgins, 2016; Lim & Pyun, 2019; Yen *et al.*, 2015).

In the same vein, research shows that teacher beliefs can also affect online EFL teaching practice (Basturkmen, 2012; Kagan, 1992; Pajares, 1992), technology use (Ertmer, 2005; Mouza, 2011; O'Neal *et al.*, 2017; Tondeur *et al.*, 2008), lesson planning and materials selection (Chan & Lam, 2003; Kitsantas & Baylor, 2001; Moallem, 1998). For instance, teacher beliefs may result in a refusal to use technology (Brush *et al.*, 2008), inappropriate integration of technology (O'Neal *et al.*, 2017), and inconsistency with face-to-face practices (Ertmer, 2005; Hsu, 2013).

Albeit the challenges brought by VSCMC features and teacher beliefs, research on VSCMC seems to be less common in part due to greater difficulty to collect data (Hung & Higgins, 2016; Hubbard, 2021). Moreover, scarce attention has been paid to Children's VSCMC (Coyle & Reverte Prieto, 2017; Yu, 2018). We could only find one recent study that focused on young EFL learners. In this longitudinal study, Ockert (2015) focused on 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. Following this, we will look at how teacher beliefs influence VSCMC integration. Similarly, teacher beliefs about VSCMC with young learners, an inadequately studied field (Coyle & Reverte Prieto, 2017; Mei *et al.*, 2018), warrant more research.

Given these circumstances, this study aimed to better understand how the beliefs of Chinese teachers influence their lesson planning for young EFL learners. The conceptual framework that guided the study will be presented in the next section followed by the methodology. Then, we will present and discuss the results associated with the ways teacher beliefs influenced lesson planning in VSCMC contexts.

## Conceptual Framework

### Teacher Beliefs

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.

Research has confirmed the impact of teacher beliefs on technology use (e.g., Chaaban & Ellili-Cherif, 2017; Jones, 2017; Kriek & Coetzee, 2021). It is in that line of thought that Miller *et al.* (2003) developed an overarching framework for teacher beliefs about technology integration that includes three types of beliefs – pedagogical beliefs, self-efficacy beliefs, and value beliefs.

Pedagogical beliefs denote the underlying understandings about teaching and learning that teachers verify (Tondeur *et al.*, 2008). 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).

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;). Schmidt (2019) argues that pedagogical beliefs may enhance or impede language teachers' Technological, Pedagogical, and Content Knowledge (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, however, teachers would often use the technology differently to support their teaching practices based on their pedagogical beliefs.

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. Self-efficacy beliefs about technology integration are related to the frequency of technology use, device affordances (e.g., multimedia, apps, and touchscreen) and availability, value beliefs, successful experience with technology, and pertinent professional development (Birisci & Kul, 2019; Tilton & Hartnett, 2016).

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 (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 refusal of using technology or create barriers to technology applications (Hew & Brush, 2007; Ertmer *et al.*, 2012; Gbemu *et al.*, 2020).

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). Teachers' perceived values can influence teachers' academic choices and performance (Wigfield & Eccles, 2000). 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 a 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 to using technology. The researchers claimed that teachers' perceived value of technology could predict the extent of technology integration in the EFL classroom.

Albeit the significant role of teacher beliefs in technology integration, limited research can be found pertaining to the influence of teacher belief about VSCMC with young learners. The only study that we could find from the 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 of 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.

In this paper, pedagogical belief is defined as EFL teachers' perceived effective teaching regarding young learners in VSCMC contexts (Miller *et al.*'s, 2003). 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 is defined as teachers' perceived value of VSCMC for EFL young learners (Miller *et al.*'s, 2003). Next, we will focus on 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). 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). For instance, Farrell (2002), defines lesson planning as “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 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 & Heidari, 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.

A growing trend in research concerns planning for technology integration (e.g., Hutchison & Woodward, 2018; Kimmons *et al.*, 2020; Thoma *et al.*, 2017). However, limited research has been done about lesson planning for online teaching in K-12 education (Avgerinou & Pelonis, 2021). For instance, 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).

In this paper, 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 & Heidari, 2014).

Given the rapid growth of EFL online commercial schools in China, it is necessary and urgent to investigate Chinese teachers’ beliefs about VSCMC with young learners and their impacts on lesson planning. As my review shows, no study has focused on teacher beliefs about VSCMC with young EFL learners in Chinese 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.

Four key concepts that emerge from the literature forms the conceptual framework, namely teacher belief (i.e., pedagogical belief, self-efficacy belief, and value belief), and lesson planning, providing the foundation for the following research question guiding this study: How do Chinese EFL online commercial school teachers’ pedagogical beliefs, self-efficacy beliefs, and value beliefs about VSCMC influence their lesson planning?

## Methodology

### Design

The study was designed as an exploratory multiple case study (Yin, 2017) that investigated how teacher beliefs influenced lesson planning. Specifically, we interviewed six Chinese EFL teachers working in

private language schools for young learners. Each teacher was a case because their decisions were particular to their classroom settings, beliefs, and lesson planning processes (Yin, 2017). According to Stake (2013), multiple case studies are congruent with multiple realities in that dichotomous views of the phenomenon are preserved. 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. As such, we could build a holistic understanding of teacher beliefs and their impacts on lesson planning through analyzing the cases separately and collectively (Creswell, 2014). Data were analyzed through within-case and cross-case analysis.

## **Context**

Since teacher beliefs are closely related to contexts and experiences (Negueruela-Azarola, 2011), it is significant to explore beliefs through contextualizing the participants' beliefs and practices (Cross, 2009). The current study focused on Chinese EFL teachers from private schools in Beijing, where VSCMC teaching was mostly practiced. Those schools all offered EFL English classes to Chinese young learners. However, those schools were of different scales and applied different teaching platforms and curriculums.

## **Participants**

After granted ethics approval from University of Ottawa, we adopted purposeful sampling (Creswell, 2014) to contact potential participants. To address the research question, we made deliberate choices based on two objectives (Seawright & Gerring, 2008): (1) all samples should be representative; (2) samples should be varied. Therefore, we decided on the following criteria while sampling: 1) Chinese EFL teachers teaching in different commercial schools to ensure samples to be representative and varied, 2) teaching 5-12-year-old students due to the focus of the current study being young learners, 3) teaching in VSCMC contexts for more than three years, given that the experienced teachers' beliefs are more reliable in their practices (Basturkmen, 2012), 4) Teachers working in Beijing, where, back to the time when the research was conducted, many of the online commercial schools were located due to the rich educational resources. Besides, the first author worked as an online EFL teacher in Beijing, where he had many connections with EFL teachers in different commercial schools.

We recruited six participants from different commercial schools in Beijing for this study. In current study, the number of participants were also appropriate. Since qualitative research entails a more in-depth investigation (Creswell, 2014), a limited number of participants allows the researchers to acquire a holistic understanding (Seidman, 2006). As such, we could draw insights from multiple participants as well as conduct an in-depth analysis for each case. 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 our research, six teachers met the criteria and agreed to participate.

The participants were all Chinese EFL teachers (See Table 1). 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 a different educational background and held various teaching certificates. These teachers used distinctive teaching tools, namely teaching in different contexts. Besides, they taught different age groups and numbers of students, contributing to a more extensive view of VSCMC.

**Table 1** Participant Demographics

Pseudonym	Gender	Years in VSCMC Teaching	Students' age	Number of students in a class	Number of Students Taught in Total
Lynn	F	6	5–12	4–6	17
ChrisLeeson	M	4	5–7	4	16
Yinko	F	6	5–7	4	8
Andy	M	4	7–9	1	4
Ariel	F	6	7–9	4	4
Brandie	F	3	8–12	11	11

### Data Collection

The first author conducted two rounds of semi-structured interviews through telephone with individual teachers, guided by interview guidelines (Creswell, 2014). The first author interviewed the participants in Mandarin, which allowed them to fully express themselves in an articulate and comfortable manner (Creswell, 2014). Each round of the interview took up approximately 45 minutes to an hour.

Participants were asked to describe their school contexts, teaching platforms, lesson planning experiences, and pedagogical beliefs in the first round of interviews. Specifically, the first author 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 took place one week later. The participants were asked about their self-efficacy beliefs, value beliefs, and their reflections on the impact of their beliefs on 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.

Data was exclusively collected through interviews. We did not collect data from other sources, such as documents, observation, and video recording (Creswell, 2014). To enhance the internal validity, we address this limitation by following Merriam's (1995) suggestions, in that we connected the findings to the current literature, conducted member checks with all participants, asking two professors from University of Ottawa to examine and comment on the findings.

### Data Analysis

The interviews were recorded and transcribed as descriptive data for qualitative analysis. Member checking was used to validate the research (Creswell, 2014). That said, after transcribing data, we sent the transcripts back to the participants for feedback to improve the accuracy. After member check, we uploaded the raw data to NVivo to conduct the data analysis.

To analyze the data for a multiple case study, we first analyzed every case separately within its unique context, followed by analyzing cross cases collectively (Stake, 2013; Yin, 2017). Specifically, the first author conducted a within-case analysis (Miles *et al.*, 2014), in which each participant's beliefs were presented. To begin with, he 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. He applied the start list in the first case through line-by-line coding. He followed Creswell's (2014) steps: First, he went through the text data; Next, he divided this data into different segments in NVivo and labeled the segments with either the codes in the start list or emerging codes; Third, he developed the codebook (i.e., a set of codes, definitions, and examples) (Miles *et al.*, 2014) for coding the data; Fourth, he verified the codebook through interrater reliability (Creswell & Poth, 2016); Finally, he used the codebook to code the rest of the data.

Following the within-case analysis, the first author compared and contrasted the cases through a cross-case analysis (Miles *et al.*, 2014). In other words, themes were generated deductively in line with the conceptual framework, such as teacher-centered and student-centered pedagogical beliefs and elements of lesson planning (e.g., learning objectives, teaching procedure, and teaching materials). Themes also emerged inductively from the data that showcased teachers' reflection on how teacher beliefs could influence lesson planning for VSCMC classes.

To maintain the trustworthiness, we offered detailed descriptions so that the readers can decide the transferability of the findings (Creswell, 2014). In the current research, we described the teachers' experience and school contexts and quoted large amounts of verbatims in the findings.

## Findings

This multiple case study identified (1) teachers who held different extent of both student-centered beliefs, strong self-efficacy beliefs, and positive value beliefs, (2) reciprocal relationship between teacher beliefs and lesson planning.

### School Contexts

All participants worked for private EFL schools in Beijing. However, the schools were different in curriculum development, duration and frequency of classes, and the choice of teaching platforms (See Table 2).

Schools had different policies for curriculum development. Three participants (Lynn, ChrisLeeson, and Brandie) reported that the curriculum developers were responsible to design the curriculum, including the choice of teaching goals, methods, content, and materials. Meanwhile, the other three participants (Yinko, Andy, and Ariel) indicated that they would develop the courses themselves.

**Table 2** *School Context*

School	Curriculum Developed by	The Duration of Each Class (minutes)	No. of Classes/ week/group	Teaching Platform
Lynn	Curriculum designers	30–40	2	Classin
ChrisLeeson	Curriculum designers	25–40	2	Classin
Yinko	Teachers	40	2	School-Developed
Andy	Teachers	50	1	Zoom
Ariel	Teachers	50	2	Classin
Brandie	Curriculum designers	120	1	School-Developed

Meanwhile, the duration and frequency of the classes were also different. Each class reported by three participants' (Lynn, ChrisLeeson, and Yinko) lasted 25 to 40 minutes, which was shorter than those of Andy and Ariel's school (e.g., 50 minutes). Meantime, classes in Brandie's school had the longest time, which was 120 minutes per class. Concerning the frequency of classes, while four participants' (Lynn, ChrisLeeson, Yinko, and Ariel) school offered classes for each group twice a week, two schools (Andy and Brandie's) only offered one class for each group.

Each school employed disparate teaching platforms. Four schools (Lynn, ChrisLeeson, Andy, and Ariel's) adopted third-party teaching platforms (e.g., Classin and Zoom). In comparison, Yinko and Brandie's school developed their own teaching platforms.

### **Teacher's Complex Belief Systems towards VSCMC**

#### *Pedagogical beliefs*

All participants held combined teacher-centered and student-centered beliefs. Four participants (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 because "the students were too young." Lynn explained,

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.

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 "the 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. For example, Lynn stated,

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

Andy claimed that he could "use all the features" and exemplified features that he applied in his teaching, including "sharing screen, annotation, texting, pointer, muting and unmuting." Ariel demonstrated her "advanced skills" in designing interactive slides. She recalled,

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.

Meanwhile, five participants (Brandie, Yinko, Ariel, ChrisLeeson, and Andy) expressed their challenges with the teaching platform. Yinko and Ariel faced the challenges of “manipulating the teaching platform as well as the students.” Yinko indicated,

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

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 (ChrisLeeson, Lynn, Brandie, Yinko, and Ariel) were confident. ChrisLeeson and Brandie referred to the high “retention rates” of their classes. Since Yinko considered herself 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 to 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.”

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

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.

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 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 losing the traditional face-to-face teaching.

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

All participants agreed 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.

Moreover, five participants (Andy, Lynn, Ariel, Yinko, and Brandie) argued that their lesson planning as part of their teaching practice would influence their beliefs. Andy, Lynn and Ariel argued that they would reconstruct their beliefs when reflecting on their practices during lesson planning. Yinko argued that she would not “build her beliefs towards VSCMC if she had never practiced it.” Brandie agreed that her past experience allowed her to “understand what could be possible, plausible and feasible.” Therefore, her lesson planning also shaped her beliefs.

### ***Pedagogical beliefs***

All participants’ lesson planning illustrated the consistency between their pedagogical 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 ages, which aligned with their student-centered pedagogical beliefs. In terms of levels, Brandie reflected that she used “English as the medium of teaching” because her students were competent in English communication. She also presented the content based on “students’ prior knowledge.” Yinko added that assessment time should depend on students’ levels. She also 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.

With regard to students’ ages, 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.

Four participants (Andy, Ariel, Lynn, and Yinko) chose teaching content and materials that served their student-centered beliefs. Andy and Ariel decided on materials to nurture “independent learners.” Moreover, Lynn and Yinko believed that teaching content should be relevant to “students’ daily life” and communications.

Moreover, all participants engaged the students with different features of the teaching platform. 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 stimulate students. Brandie adopted “Flash games” to practice vocabulary and grammar. She was also in favor of “the rewarding system” embedded in the teaching platform, 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 confusion, which was an alternative assessment for the lesson that the teacher could take advantage of to refine the lesson plan.

In alignment with teacher-centered belief, all participants adopted, though to a different extent, the ready-made curriculum. Three participants (Lynn, ChrisLeeson, and Brandie) 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 sound English Standards (e.g., the Common European Framework of Reference), 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 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.”

In contrast, five participants (ChrisLeeson, Lynn, Andy, Yinko, and Brandie) displayed some inconsistencies between their pedagogical beliefs and lesson planning. Lynn’s choices of learning objectives, materials, and activities were all compatible with student-centered beliefs through the consideration of students’ ages, levels, and interests, which were against her teacher-centered belief. ChrisLeeson argued that he was a “true believer” in student-centered approaches. However, the “PPP model” (i.e., present, practice, and produce) adopted by ChrisLeeson, which he believed was “the most efficient” model for teaching English, was against his student-centered beliefs. Although Yinko expected to integrate student-centered activities, she only exemplified teacher-directed games, 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 on the student-centered sessions, however, she would involve teacher-directed activities such as “grammar and vocabulary exercises.”

### ***Self-efficacy belief and value beliefs***

When discussing the influence of their beliefs on lesson planning, the participants’ answers indicate a combined effect of self-efficacy and value beliefs. Therefore, we will discuss both self-efficacy and value beliefs in this section.

All participants shared their most used features embedded in their teaching platforms, such as “video,” “audio,” “screen sharing,” and “annotation.” They were confident in using the features 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.”

Brandie and Yinko indicated that their self-efficacy and value beliefs guided them to have a positive attitude towards challenges. Yinko said,

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.

Given their perceptions of VSCMC teaching's benefits and drawbacks and their capability of teaching, Andy and Brandie could make better decisions on activities in lesson planning. Brandie said,

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.

Moreover, all participants developed learning objectives that were best suitable, though differently, for VSCMC instructions, showcasing their value beliefs and self-efficacy beliefs. For example, Yinko elaborated,

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.

Since the participants 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.

In summary, all participants demonstrated 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. Similarly, most participants argued that their lesson planning as part of their past experience would also contribute to the formation of their beliefs. Based on the analysis, 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.

## Discussion

In this section, we discuss how teacher beliefs affect teachers' decision-making in their lesson planning. We explore factors that lead to the consistency and inconsistency between teacher beliefs and lesson planning.

Teacher beliefs explicate the differences in planning technology integration (Prestridge & de Aldama, 2016; Tondeur *et al.*, 2017). 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 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. 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 caused by external factors (Borg, 1999; Duffy & Anderson, 1984; Taimalu & Luik, 2019). As the teacher belief and lesson planning

section discussed, teachers had divergent lesson planning affected by their students 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 interactions. 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.

### Conclusion and Implications

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, 2013). Given the uniqueness of EFL young learners (Setyaningsih, 2007) and the influence of teacher beliefs on lesson planning (Basturkmen, 2012; Kagan, 1992; Pajares, 1992), we interviewed six EFL teachers to explore how Chinese EFL teachers' beliefs about VSCMC with young learners would impact lesson planning. The results indicated that teachers had transitional pedagogical beliefs partially due to technological constraints. The participants had strong self-efficacy beliefs because of their adequate exposure to VSCMC teaching platforms. 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.

Understanding teacher beliefs would be conducive to teachers, teacher training, and teaching platform development. The six cases in the current study would act as references for teachers during the process of reflection. Teacher trainers should be aware of teacher beliefs to better prepare the pre-service teachers. Meanwhile, teaching platform developers should develop customized tools for teachers to use.

This research fills the gap of understanding VSCMC in the field of EFL education for young children. The current study echoed with previous 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.*, 2017). Moreover, it offers a detailed account to support previous findings. Given the characteristics of young learners, this research disagrees with some research on adult learners (e.g., Wang, 2006; Yen *et al.*, 2015; Ziegler, 2016). Given the widespread use of VSCMC, future research might be done in different contexts and/or language educations.

### References

- Abbitt, J. (2011). An investigation of the relationship between self-efficacy beliefs about technology integration and technological pedagogical content knowledge (TPACK) among pre-service teachers. *Journal of Digital Learning in Teacher Education*, 27(4), 134–143. <https://doi.org/10.1080/21532974.2011.10784670>

- Anderson, S. E., & Maninger, R. M. (2007). Pre-service teachers' abilities, beliefs, and intentions regarding technology integration. *Journal of Educational Computing Research*, 37(2), 151–172. <https://doi.org/10.2190/H1M8-562W-18J1-634P>
- Avgerinou, M. D., & Pelonis, P. (Eds.). (2021). *Handbook of Research on K-12 Blended and Virtual Learning Through the i<sup>2</sup>Flex Classroom Model*. IGI Global.
- Baralt, M., & Morcillo Gomez, J. (2017). Task-based language teaching online: A guide for teachers. *Language Learning & Technology*, 21(3), 28–43.
- Bartholomew, S., Loveland, T., & Santana, V. (2020). Writing standards-based lesson plans to standards for technological and engineering literacy. *Technology and Engineering Teacher*, 80(3), 14–23.
- Basturkmen, H. (2012). Review of research into the correspondence between language teachers' stated beliefs and practices. *System*, 40(2), 282–295. <https://doi.org/10.1016/j.system.2012.05.001>
- Birisci, S., & Kul, U. (2019). Predictors of technology integration self-efficacy beliefs of preservice teachers. *Contemporary Educational Technology*, 10(1), 75–93. <https://doi.org/10.30935/cet.512537>
- Boukhechba, H., & Bouhania, B. (2019). Adaptation of instructional design to promote learning in traditional EFL classrooms: Adobe captivate for E-Learning content. *International Journal of Education and Development using Information and Communication Technology*, 15(4), 151–164.
- Branch, R. M., & Merrill, M. D. (2012). Characteristics of instructional design models. *Trends and issues in instructional design and technology*, 3, 8–16.
- Brush, T., Glazewski, K., & Hew, K. (2008). Development of an instrument to measure pre-service teachers' technology skills, technology beliefs, and technology barriers. *Computers in the Schools*, 25(1-2), 112–125. <https://doi.org/10.1080/07380560802157972>
- Buquoi, B., McClure, C., Kotrlík, J. W., Machtmes, K., & Bunch, J. C. (2013). A national research survey of technology use in the BSW teaching and learning process. *Journal of Teaching in Social Work*, 33(4–5), 481–495. doi:10.1080/08841233.2013.833577.
- Chaaban, Y., & Ellili-Cherif, M. (2017). Technology integration in EFL classrooms: A study of Qatari independent schools. *Education and Information Technologies*, 22(5), 2433–2454. <https://doi.org/10.1007/s10639-016-9552-3>
- Chai, C. S., Chin, C. K., Koh, J. H. L., & Tan, C. L. (2013). Exploring Singaporean Chinese language teachers' technological pedagogical content knowledge and its relationship to the teachers' pedagogical beliefs. *Asia-Pacific Education Researcher*, 22(4), 657–666. <https://doi.org/10.1007/s40299-013-0071-3>
- Chan, K. S. J., & Lam, C. C. (2003). The development of student teachers' beliefs through their initial teacher education. *Journal of Southeast Asian Education*, 4(1), 48–70.
- Chen, J. J., & Yang, S. C. (2014). Fostering foreign language learning through technology-enhanced intercultural projects. *Language Learning & Technology*, 18(1), 57–75.
- Chun, D. M. (2016). The role of technology in SLA research. *Language Learning & Technology*, 20(2), 98–115.
- Coyle, Y., & Reverte Prieto, M. J. (2017). Children's interaction and lexical acquisition in text-based online chat. *Language Learning & Technology*, 21(2), 179–199. <https://dx.doi.org/10125/44617>
- Creswell, J. (2014). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research (5th ed.)*. Boston: Pearson.
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Los Angeles: Sage publications.
- Cross, D. I. (2009). Alignment, cohesion, and change: Examining mathematics teachers' belief structures and their influence on instructional practices. *Journal of Mathematics Teacher Education*, 12(5), 325–346. <https://doi.org/10.1007/s10857-009-9120-5>

- Deal, D., & White, C. S. (2006). Voices from the classroom: Literacy beliefs and practices of two novice elementary teachers. *Journal of Research in Childhood Education*, 20, 313–329. <https://doi.org/10.1080/02568540609594570>
- Ding, A. C. E., Ottenbreit-Leftwich, A., Lu, Y. H., & Glazewski, K. (2019). EFL teachers' pedagogical beliefs and practices with regard to using technology. *Journal of Digital Learning in Teacher Education*, 35(1), 20–39. <https://doi.org/10.1080/21532974.2018.1537816>
- Dunn, R., Craig, M., Favre, L., Markus, D., Pedota, P., Sookdeo, G., ... & Terry, B. (2010). No light at the end of tunnel vision: Steps for improving lesson plans. *The Clearing House*, 83(5), 194–206. <https://doi.org/10.1080/00098650903507460>
- Epp, C. D., Park, G., & Plumb, C. (2015). Developing an adaptive tool to select, plan, and scaffold oral assessment tasks for undergraduate courses. *Educational Technology Research and Development*, 63(3), 475–498. <http://doi.org/10.1007/s11423-015-9375-8>
- Ertmer, P. (2005). Teacher pedagogical beliefs: The final frontier in our quest for technology integration? *Educational Technology Research and Development*, 53(4), 25–39. <https://doi.org/10.1007/BF02504683>
- Ertmer, P. A., Conklin, D., Lewandowski, J., Osika, E., Selo, M., & Wignall, E. (2003). Increasing pre-service teachers' capacity for technology integration through the use of electronic models. *Teacher Education Quarterly*, 30(1), 95–112. <https://doi.org/10.1080/15391523.2004.10782414>
- Ertmer, P., Ottenbreit-Leftwich, A., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers & Education*, 59(2), 423–435. <https://doi.org/10.1016/j.compedu.2012.02.001>
- Ertmer, P. A., Ottenbreit-Leftwich, A., & York, C. S. (2006). Exemplary technology-using teachers: Perceptions of factors influencing success. *Journal of Computing in Teacher Education*, 23(2), 55–61.
- Fang, F. G. (2018). Review of English as a medium of instruction in Chinese universities today: Current trends and future directions: New language policies to promote multilingualism and language support for EMI will be needed in Chinese tertiary contexts. *English Today*, 34(1), 32–37. [doi:10.1017/S0266078417000360](https://doi.org/10.1017/S0266078417000360)
- Farrell, T. S. (2002). Lesson planning. *Methodology in language teaching: An Anthology of Current Practice*, 30–39.
- Farrell, T. S. (2013). Reflecting on ESL teacher expertise: A case study. *System*, 41(4), 1070–1082. <https://doi.org/10.1016/j.system.2013.10.014>
- Fauzi, I., & Khusuma, I. H. S. (2020). Teachers' elementary school in online learning of COVID-19 pandemic conditions. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 5(1), 58–70. <https://doi.org/10.25217/ji.v5i1.914>
- Feng, R., & Shirvani, S. (2021). Compensatory strategies adopted by Chinese EFL learners in virtual exchange with native speakers. In M. Satar (Eds.), *Virtual exchange: Towards digital equity in internationalisation* (pp. 63–72). Research-publishing.net.
- Freiberg, H. J., & Driscoll, A. (2000). *Universal teaching strategies*. Boston: Allyn & Bacon.
- Funkhouser, B. J., & Mouza, C. (2013). Drawing on technology: An investigation of pre-service teacher beliefs in the context of an introductory educational technology course. *Computers & Education*, 62, 271–285. <https://doi.org/10.1016/j.compedu.2012.11.005>
- Gbemu, L. A., Sarfo, F. K., Adentwi, K. I., & Aklassu-Ganan, E. (2020). Teacher Educators' Self-Efficacy Beliefs and Actual Use of ICTs in Teaching in the Kumasi Metropolis. *Turkish Online Journal of Educational Technology – TOJET*, 19(2), 13–23.
- Guichon, N., & Cohen, C. (2014). The impact of the webcam on an online L2 interaction. *Canadian Modern Language Review*, 70(3), 331–354. <https://doi.org/10.3138/cmlr.2102> <http://dx.doi.org.proxy.bib.uottawa.ca/10.3138/cmlr.2102>

- Hatch, L., & Clark, S. K. (2021). A study of the instructional decisions and lesson planning strategies of highly effective rural elementary school teachers. *Teaching and Teacher Education, 108*, 103505. <https://doi.org/10.1016/j.tate.2021.103505>
- Hew, K., & Brush, T. (2007). Integrating technology into K-12 teaching and learning: Current knowledge gaps and recommendations for future research. *Educational Technology Research and Development, 55*(3), 223–252. <https://doi.org/10.1007/s11423-006-9022-5>
- Howard. (2013). Risk-aversion: Understanding teachers' resistance to technology integration. *Technology, Pedagogy and Education, 22*(3), 357–372. <https://doi.org/10.1080/1475939X.2013.802995>
- Hsu, P.-S. (2013). Examining changes of pre-service teachers' beliefs about technology integration during student teaching. *Journal of Technology and Teacher Education, 22*(1), 27–48.
- Hu, Y. (2007). China's foreign language policy on primary English education: What's behind it? *Language Policy, 6*(3-4), 359–376. <https://doi.org/10.1007/s10993-007-9052-9>
- Hubbard, P. (2021). *An invitation to CALL: Foundations of computer-assisted language learning*. Asia-Pacific Association for Computer-Assisted Language Learning (APACALL).
- Hung, Y. W., & Higgins, S. (2016). Learners' use of communication strategies in text-based and video-based synchronous computer-mediated communication environments: Opportunities for language learning. *Computer Assisted Language Learning, 29*(5), 901–924. <https://doi.org/10.1080/09588221.2015.1074589>
- Hutchison, A., & Woodward, L. (2018). Examining the technology integration planning cycle model of professional development to support teachers' instructional practices. *Teachers College Record, 120*(10), 1–44. <https://doi.org/10.1177/016146811812001002>
- Inayati, D., & Emaliana, I. (2017). The relationship among pre-service EFL teachers' beliefs about language learning, pedagogical beliefs, and beliefs about ICT integration. *Dinamika Ilmu, 17*(1), 83–99. <https://doi.org/10.21093/di.v17i1.664>
- Jacobs, C. L., Martin, S. N., & Otieno, T. C. (2008). A science lesson plan analysis instrument for formative and summative program evaluation of a teacher education program. *Science education, 92*(6), 1096–1126. <https://doi.org/10.1002/sci.20277>
- Jamali N. A., & Heidari, M. (2014). The important role of lesson plan on educational achievement of Iranian EFL teachers' attitudes. *International Journal of Foreign Language Teaching and Research, 2*(5), 27–34.
- Jiguang (2020). 2020 China online EFL education industry research report [2020 nian Zhong guo zai xian qing shao er ying yu jiao yu hang ye yan jiu bao gao]. Retrieved from <https://www.moonfox.cn/insight/detail?id=927>
- Jones, S. J. (2017). Technology in the Montessori classroom: Teachers' beliefs and technology use. *Journal of Montessori Research, 3*(1), 16–29.
- Kagan, D. (1992). Implications of research on teacher belief. *Educational Psychologist, 27*(1), 65–90. [https://doi.org/10.1207/s15326985ep2701\\_6](https://doi.org/10.1207/s15326985ep2701_6)
- Kimmons, R., Graham, C. R., & West, R. E. (2020). The PICRAT model for technology integration in teacher preparation. *Contemporary Issues in Technology and Teacher Education, 20*(1), 176–198.
- Kimmons, R., & Hall, C. (2016). Toward a broader understanding of teacher technology integration beliefs and values. *Journal of Technology and Teacher Education, 24*(3), 309–335.
- Kirkpatrick, A. (2011). English as an Asian lingua franca and the multilingual model of ELT. *Language Teaching, 44*(2), 212–224. doi:10.1017/S0261444810000145
- Kitsantas, A., & Baylor, A. (2001). The impact of the instructional planning self-reflective tool on pre-service teacher performance, disposition, and self-efficacy beliefs regarding systematic instructional planning. *Educational Technology Research and Development, 49*(4), 97–106. <https://doi.org/10.1007/BF02504949>
- Kriek, J., & Coetzee, A. (2021). Interaction between teacher and student beliefs when using different technology tools in a tertiary context. *International Journal of Technology Enhanced Learning, 13*(2), 121–138.

- Kwon, K., Ottenbreit-Leftwich, A., Sari, A. R., Khlaif, Z., Zhu, M., Nadir, H., & Gok, F. (2019). Teachers' self-efficacy matters: exploring the integration of mobile computing device in middle schools. *TechTrends: Linking Research and Practice to Improve Learning*, 63(6), 682–692. <https://doi.org/10.1007/s11528-019-00402-5>
- Lee, C. Y., Turner, S., Huang, W., & Kessler, G. (2007, March). Using synchronous computer-mediated communication to teach foreign students spoken English: An exploratory study. In *Society for Information Technology & Teacher Education International Conference* (pp. 397–404). Association for the Advancement of Computing in Education (AACE).
- Lee, L. (2007). Fostering second language oral communication through constructivist interaction in desktop videoconferencing. *Foreign Language Annals*, 40(4), 635–649. <https://doi.org/10.1111/j.1944-9720.2007.tb02885.x>
- Lee, Y., Chen, X. & Khum, G. (2009). Mathematics teachers' practices and thinking in lesson plan development: A case of teaching fraction division. *ZDM Mathematics Education* 41, 717–731. <https://doi.org/10.1007/s11858-009-0174-8>
- Li, C. C., Ligao Wu, C. L., & Tang, J. (2017). Exploring meaning negotiation patterns in synchronous audio and video conferencing English classes in China. In K. Borthwick, L. Bradley & S. Thouesny (Eds.), *CALL in a climate of change: Adapting to turbulent global conditions* (pp. 194–199). Research-publishing.net.
- Li, W., & Zou, W. (2017). A study of EFL teacher expertise in lesson planning. *Teaching and Teacher Education*, 66, 231–241. <https://doi.org/10.1016/j.tate.2017.04.009>
- Lim, B. J., & Pyun, D. O. (2019). Korean foreign language learning: Videoconferencing with native speakers. In *Computer-Assisted Language Learning: Concepts, Methodologies, Tools, and Applications* (pp. 1123–1146). Hershey: IGI Global. DOI: 10.4018/978-1-5225-7663-1.ch054
- Liu, H., Lin, C., & Zhang, D. (2017). Pedagogical beliefs and attitudes toward information and communication technology: A survey of teachers of English as a foreign language in China. *Computer Assisted Language Learning*, 30(8), 745–765. <https://doi.org/10.1080/09588221.2017.1347572>
- Mei, B., Brown, G. T., & Teo, T. (2018). Toward an understanding of pre-service English as a Foreign Language teachers' acceptance of computer-assisted language learning 2.0 in the People's Republic of China. *Journal of Educational Computing Research*, 56(1), 74–104. <https://doi.org/10.1177/0735633117700144>
- Merriam, S. B. (1995). N of I?: Issues of Validity and Reliability in. *PAACE Journal of lifelong learning*, 4, 51–60.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook*. Thousand Oaks: Sage.
- Miller, S., Meier, E., Payne-Bourcy, L., Shablak, S., Newman, D., Wan, T. W., ... & Pack, G. (2003). *Technology as a catalyst for change: A leadership model for transforming urban teacher programs*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Ministry of Education (MoE) (2019). The number of students in primary school. *Ministry of Education of China*. Retrieved from [shorturl.at/coAW0](http://shorturl.at/coAW0)
- Moallem, M. (1998). An expert teacher's thinking and teaching and instructional design models and principles: An ethnographic study. *Educational Technology, Research and Development*, 46(2), 37–64. <https://doi.org/10.1007/BF02299788>
- Mouza, C. (2011). Promoting urban teachers' understanding of technology, content, and pedagogy in the context of case development. *Journal of Research on Technology in Education*, 44(1), 1–29. <https://doi.org/10.1080/15391523.2011.10782577>
- Murray, D. E. (2000). Protean communication: The language of computer-mediated communication. *TESOL Quarterly*, 34(3), 397–421. <https://doi.org/10.2307/3587737>
- Negueruela-Azarola, E. (2011). Beliefs as conceptualizing activity: A dialectical approach for the second language classroom. *System*, 39(3), 359–369. <https://doi.org/10.1016/j.system.2011.07.008>

- O'Neal, L., Gibson, P., & Cotten, S. (2017). Elementary school teachers' beliefs about the role of technology in 21st-century teaching and learning. *Computers in the Schools*, 34(3), 192–206. <https://doi.org/10.1080/07380569.2017.1347443>
- Ockert, D. (2015). Skype-based English activities: A case for compelling input? correlational changes before and after Skype exchanges. *Teaching English with Technology*, 15(3), 47–60.
- Overbay, A., Patterson, A. S., Vasu, E. S., & Grable, L. L. (2012). Constructivism and technology use: Findings from the IMPACTing Leadership project. *Educational Media International*, 47(2), 103–120. <https://doi.org/10.1080/09523987.2010.492675>
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62(3), 307–332. <https://doi.org/10.3102/00346543062003307>
- Petersen, K., & Sachs, R. (2015). The language classroom in the age of networked learning. In R. P. Leow, L. Cerezo, & M. Baralt (Eds.), *Technology and L2 learning: A psycholinguistic approach* (pp. 3–22). Berlin: De Gruyter Mouton.
- Prestridge, S., & de Aldama, Carlos (2016). A classification framework for exploring Technology-Enabled-Practice-Frame (TEP). *Journal of Educational Computing Research*, 54(7), 901–921. <https://doi.org/10.1177/0735633116636767>.
- Quadir, B., & Zhou, M. (2021). Students Perceptions, System Characteristics and Online Learning During the COVID-19 Epidemic School Disruption. *International Journal of Distance Education Technologies (IJDET)*, 19(2), 15–33. <http://doi.org/10.4018/IJDET.20210401.oa1>
- Richards, J. & Rodgers, T. (2014). *Approaches and methods in language teaching*. Cambridge: Cambridge University Press.
- Richardson, V. (1996). The role of attitudes and beliefs in learning to teach. In J. Sikula (Ed.), *Handbook of research on teacher education* (2nd ed.) (pp. 102-119). New York: Macmillan.
- Riddell, D. (2014). *Teach EFL: The complete guide*. London: Teach Yourself.
- Rusznyak, L., & Walton, E. (2011). Lesson planning guidelines for student teachers: A scaffold for the development of pedagogical content knowledge. *Education as Change*, 15(2), 271–285. <https://doi.org/10.1080/16823206.2011.619141>
- Ruys, I., Keer, H. V., & Aelterman, A. (2012). Examining pre-service teacher competence in lesson planning pertaining to collaborative learning. *Journal of Curriculum Studies*, 44(3), 349–379. <https://doi.org/10.1080/00220272.2012.675355>
- Schmidt, N. (2019). Digital multimodal composition and second language teacher knowledge. *TESL Canada Journal*, 36(3), 1–30.
- Seawright, J., & Gerring, J. (2008). Case selection techniques in case study research: A menu of qualitative and quantitative options. *Political Research Quarterly*, 61(2), 294–308.
- Seidman, I. (2006). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. Teacher College Press.
- Setyaningsih, A. (2007). Teaching English to young learners through songs. *Journal of English and Education*, 1(2), 75–85.
- Stake, R. E. (2013). *Multiple case study analysis*. New York: Guilford press.
- Stickler, U. & Shi, L. (2013). Supporting Chinese speaking skills online. *System*, 41, 50–69. <https://doi.org/10.1016/j.system.2012.12.001>
- Stockwell, G. (2010). Effects of multimodality in computer-mediated communication tasks. In M. Thomas, & H. Reinders (Eds.), *Task-based language learning and teaching with technology*. London: Continuum.
- Sunaoka, K. (2018). The interactive modes of non-native speakers in international Chinese language distance class discussions: An analysis of smiling as a facial cue. *Innovation in Language Learning and Teaching*, 12(1), 24–34. <https://doi.org/10.1080/17501229.2018.1418625>
- Teo, T., Huang, F., & Hoi, C. K. W. (2018). Explicating the influences that explain intention to use technology among English teachers in China. *Interactive Learning Environments*, 26(4), 460–475. <https://doi.org/10.1080/10494820.2017.1341940>

- Thoma, J., Hutchison, A., Johnson, D., Johnson, K., & Stromer, E. (2017). Planning for technology integration in a professional learning community. *The Reading Teacher*, 71(2), 167–175. <https://doi.org/10.1002/trtr.1604>
- Tilton, J., & Hartnett, M. (2016). What are the influences on teacher mobile technology self-efficacy in secondary school classrooms? *Journal of Open, Flexible and Distance Learning*, 20(2), 79–93.
- Tondeur, J., Van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2017). Understanding the relationship between teachers' pedagogical beliefs and technology use in education: A systematic review of qualitative evidence. *Educational Technology Research and Development*, 65(3), 555–575. <https://doi.org/10.1007/s11423-016-9481-2>
- Tondeur, J., van Keer, H., van Braak, J., & Valcke, M. (2008). ICT integration in the classroom: Challenging the potential of a school policy. *Computers & Education*, 51(1), 212–223. <https://doi.org/10.1016/j.compedu.2007.05.003>
- Van Praag, B., & Sanchez, H. S. (2015). Mobile technology in second language classrooms: Insights into its uses, pedagogical implications, and teacher beliefs. *ReCALL*, 27(3), 288–303. doi:10.1017/S0958344015000075
- Vdovina, E., & Gaibisso, L. C. (2013). Developing critical thinking in the English language classroom: A lesson plan. *ELTA journal*, 1(1), 54–68.
- Wang, L., Ertmer, P., & Newby, T. (2004). Increasing pre-service teachers' self-efficacy beliefs for technology integration. *Journal of Research on Technology in Education*, 36(3), 231–250. <https://doi.org/10.1080/15391523.2004.10782414>
- Wang, Y. (2006). Negotiation of meaning in desktop videoconferencing-supported distance language learning. *ReCALL*, 18(1), 122–145. doi:10.1017/S0958344006000814
- Wang, Y., & Chen, N. S. (2012). The collaborative language learning attributes of cyber face-to-face interaction: The perspectives of the learner. *Interactive Learning Environments*, 20(4), 311–330. <https://doi.org/10.1080/10494821003769081>
- Whitton, D., Sinclair, C., Barker, K., Nanlohy, P. & Nosworthy, M. (2016). *Learning for teaching: Teaching for learning*. South Melbourne: Cengage
- Wigfield, A., & Eccles, J.S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25, 68–81. <https://doi.org/10.1006/ceps.1999.1015>
- Xiao, Y. (2020). A Canadian-based online English educational company promoting equity of education in rural China. *Frontiers in Educational Research*, 3(12). <https://doi.org/10.25236/ FER.2020.031208>
- Yen, Y. C., Hou, H. T., & Chang, K. E. (2015). Applying role-playing strategy to enhance learners' writing and speaking skills in EFL courses using Facebook and Skype as learning tools: A case study in Taiwan. *Computer Assisted Language Learning*, 28(5), 383–406. <https://doi.org/10.1080/09588221.2013.839568>
- Yin, R. K. (2017). *Case study research and applications: Design and methods*. Thousand Oaks: Sage publications.
- Yu, L. T. (2018). Native English-speaking teachers' perspectives on using videoconferencing in learning English by Taiwanese elementary-school students. *JALT CALL Journal*, 14(1), 61–76.
- Zhang, L., & Chen, Y. (2021). A blended learning model supported by MOOC/SPOC, Zoom, and Canvas in a project-based academic writing course. In N. Radic, A. Atabekova, M. Freddi, & J. Schmied (Eds.), *The world universities' response to COVID-19: Remote online language teaching* (pp. 179–198). Research-publishing.net.
- Zhao, Y., Pugh, K., Sheldon, S., & Byers, J. (2002). Conditions for classroom technology innovations. *Teachers College Record*, 104(3), 482–515.
- Ziegler, N. (2016). Synchronous computer-mediated communication and interaction: A meta-analysis. *Studies in Second Language Acquisition*, 38(3), 553–586. doi:10.1017/S027226311500025X