From Face-to-Face to Screen-to-Screen: CFL Teachers' Beliefs about Digital Teaching Competence during the Pandemic

Chun Zhang
Aarhus University, Denmark

Abstract

As coronavirus lockdowns have moved many face-to-face language teaching activities online, the use of virtual classrooms has quickly escalated. The drastic shift in venue calls for massive changes in methods and approaches to teaching languages. This study concerns the beliefs held by language teachers about modes of online language teaching and self-assessment of digital competence. The study investigates seven teachers teaching Chinese as a foreign language (CFL) in a higher education context in Denmark. The study aims to go beyond the current prevailing research on the predicaments of teachers by making their endeavors and contributions visible and meaningful during the Covid-19 pandemic. The study employs a discovery-oriented qualitative approach, largely drawn from personal narrative and ethnographic research from a sociological perspective. The aim of this study is twofold: firstly, we provide a clear picture of what expertise is available for teaching CFL online; secondly, we investigate pedagogical competence that CFL teachers need to acquire when digital teaching modes override and replace traditional teaching modes. The findings indicate that beliefs held by teachers matter in terms of the digital tools and tasks they choose to utilize. The extent to which teachers acquire digital competence depends on whether the teachers have been allocated ample institutional time to upgrade their existing pedagogical competence and how they exert their degree of teacher agency. The results of this study are expected to provide insights into redefining overarching standards of CFL pedagogy and teacher education in an era of post-Covid-19 language education.

Keywords

Teacher beliefs, digital competence, teacher agency, pedagogy, Covid-19

1 Introduction

In the struggle to get a grip on Covid-19, Denmark is demanding that schools close and students receive online lessons while remaining at home. As courses are still in progress, teachers are left desperately trying to deliver lessons to students by launching courses and lessons online within an unimaginably short notice of time. It has been widely acknowledged that online teaching characterized by free

Address: Jens Chr. Skous Vej 7, building 1465, 326, 8000 Aarhus C, Denmark
E-mail: ostzc@cas.au.dk

and broad access to cross-cultural and multilingual modes of chat, blog, and audio-video interaction contributes greatly to (in)formal language learning environment (Carrier, Damerow & Bailey, 2017; Lu, 2017; Xie, 2002). Nobody can be sure how well these courses and lessons will work. Neither the educational institutions nor the teachers expect to experience the abrupt shift from "face-to-face" classroom teaching to "screen-to-screen" teaching. Barely one day after the school closure mandated by the Danish government on March 13, 2020, teachers of my affiliated department were beginning to rewrite curricula and to plan to move lessons to virtual rooms in "Blackboard Collaborator," a synchronized videoconferencing system. As of March 16th, 2020, the virus behind Covid-19 had claimed 55 deaths across Denmark. At 8:00 a.m. on Monday, March 16th, 2020, we launched the first lesson in a virtual classroom, while across the country empty classrooms sent echoes of absent students.

1.1 Face-to-face language teaching

As coronavirus lockdowns have moved many face-to-face language teaching activities online, the use of virtual classrooms has quickly escalated. The abrupt shift in venue forced language teachers to move dramatically towards a new digital epoch, a space where technology dominated every aspect of teaching, and led us to massive and thorough changes in various ways, e.g., how we communicate with students, how we deliver online lessons, and how we assess students in virtual classrooms. In Denmark and in many other Nordic countries where foreign language skills are vital and Technology-Assisted Language Learning (TALL) is advanced, it is common for tools of TALL to be constantly introduced to classrooms and utilized by teachers and students at all levels, from elementary and secondary schools to institutions of higher education (Bech & Knudsen, 2019; Hoem, 2009). Since 2003, Denmark has employed a national qualification framework for higher education. The qualification framework has been aligned with the overarching qualification framework for the European Higher Education Area, the Bologna Framework (Ministry of Higher Education and Science, 2020). This means that Danish institutions can refer to levels in the Bologna Framework in the Diploma Supplement. In Denmark, in order to obtain a bachelor's degree in social education and a diploma in teaching, a person must acquire three core competencies, one of which that is highly expected is knowledge of technology content pedagogy (Qualifications Framework for Danish Higher Education; Tannert & Berthelsen, 2020).

It is true that online teaching, or blended teaching, has been gaining popularity as it has proved to be an effective approach for accommodating a diversified cohort of students while adding values to the learning environment (Bai, Li, & Yeh, 2019). Face-to-face teaching still has its deep theoretical foundations embedded in the social constructive theory of learning (Vygotsky, 1986). With face-to-face teaching, the teachers implement strategies or methods to keep students involved and engaged in order to retain students' attention. Classrooms can be more or less interactive depending on the teachers' educational stance. Should the teacher have a progressive teaching philosophy, the course will include lectures and social language interaction for language development. Should the teacher be an essentialist, (s)he will engage in audiolingual methods focusing on grammar, while providing fewer opportunities for social language interaction.

In Denmark, digital learning platforms have long been integrated into daily language teaching, and researches about it have been flourished for decades (Cuban, 2016; Petersen, 2014). Holmen (2015) has underscored the importance of an instructional method where course content and materials are taught in-person to students, which allows for live interaction between teachers and students. Hjuler (2019) called for the need to rethink the wall between physical classrooms and virtual rooms. She pointed out the necessity to develop "a new megatrend, which is based on possibilities of variable activities, and which remove itself from the idea of the classroom" (p.11). This means that the key to successful learning is to bridge the gap between physical and virtual spaces by extending the learning beyond physical classrooms. Tannert & Bertelsen (2020) noted that teacher educators should take the add-on

value into consideration with the use of digital learning tools; how should we use digital learning tools to add something special to classical face-to-face teaching or to traditional paper-based textbooks? The main focus of consideration is "to acquire an accessible insight into and an overview of existing research in different areas" [et let tilgængeligt indblik og overblik over den eksisterende forskning på forskellige områder] (p.3)

1.2 Impact of technology on language teaching and on teachers

Rapid advances in technology changed the way language is taught and learned along with our perceptions and conceptual designations of terminologies. In the field of computer-mediated language study, Computer-Assisted Language Learning (CALL) was a prominent term (Levy, 1997) and it has been recognized as a positive force in teaching CFL (Yao, 1996; Zhang, 1998). But the term CALL is insufficient to include more nuanced contexts of language learning (Andrews & Haythornthwaite, 2007; Derderian-Aghajanian & Wang, 2012). With the advancement of interactive web 2.0, mobile technology, and artificial intelligence, paradigmatic changes in conceptual designations are needed, and they are bound to be updated (Thomas, 2009). Terms such as Technology-Enhanced Language Learning (TELL) (Navarre, 2019) and Technology-Assisted Language Learning (TALL) (Holland & Fisher, 2008; Ko, 2017) have been commonly used in all walks of language teaching research. This study uses the term TALL throughout the entire paper as this term is broader and encompasses a larger package of technological possibilities beyond laptop/desktop designations.

With an ever-expanding accessibility to and wider application of technology, language teaching without access to technology has become inconceivable. It is a commonly accepted notion that language teaching and learning benefit from TALL. TALL offers students, most of whom are "born digital," opportunities to move beyond traditional and rigid barriers of traditional face-to-face teaching and learning (Bremholm, Hansen, & Slot, 2018). Equitable access to multiple learning modes evens the learning grounds for each student who might otherwise have less contact with the target language from traditional classes. Wide-spread access to information and greater availability to communicate online has become more prevalent to students, which positively enhances students' ability to learn independently (Petersen, 2014). However, a movement towards a total replacement of traditional face-to-face teaching brings about issues worthy of consideration. First of all, although the ever-growing number of TALL tools make teaching and learning more exciting and efficient when used properly, the speed at which technology absolutely dominates the classroom makes it difficult for teachers to keep pace with novel technology, some of which become outdated before teachers even have time to adapt to it. Secondly, the transition from "face-to-face" teaching to "screen-to-screen" teaching prompted what we may call the "thorough digital revolution" (Carrier, Damerow & Bailey, 2017; Hirsch, 2012) in language education. This revolution is characterized partly by the drastic change of teaching modes and partly by changes to teachers' professional identity. While schools remain closed, teachers across the globe feel isolated and lonely, less prepared for teaching "in front of the screen," and feel insufficiently supported by institutions (Bruun & Zachariassen, 2020). Thirdly, Covid-19 has accelerated digital teaching to the point that syllabi and curricula unfit for online teaching are adopted. The sudden closure of schools and universities not only interrupts teaching for students, the closure also coincides with a key assessment period. In order to minimize these negative impacts and interruptions on teaching, teachers all over the world are striving to overcome various hardships and work at an unprecedented speed via the internet, leaving behind their own personal frustration and professional concerns.

1.3 Research questions

Despite the challenges that Covid-19 has brought to teaching and learning, teachers' voices about digital language teaching are hardly heard. Congruently, studies on Chinese as a Foreign Language (CFL)

teachers' beliefs and conception of digital CFL is lacking. This study is thusly concerned with the impact of digital teaching on CFL teachers' decisions and practices, but is moreover about pedagogical competencies that CFL teachers need to acquire. The study explores seven CFL teachers at one Danish university as a case study aiming to investigate CFL teachers' cognition, i.e., their beliefs and views towards digital teaching. The aim of this study is twofold: firstly, we attempt to provide a clear picture of what expertise is available for teaching CFL online; secondly, we attempt to investigate pedagogical competencies that CFL teachers need to acquire when digital teaching modes override and replace traditional teaching modes. In other words, what CFL teachers know, believe, and think about the digital future of teaching CFL. The following are three guiding research questions: (1) what digital tools do CFL teachers widely use and what tasks do they use digital tools for while teaching online? (2) what are the CFL teachers' beliefs about digital competence in their teaching and the self-assessment of their digital competence? (3) what overarching standards do CFL educators aim to provide teachers to achieve digital pedagogical competence?

The study aims to achieve multiple goals. Firstly, it calls for increased attention to the plural dimensions of voices and concerns of CFL teachers while lockdowns paralyze and interrupt normal teaching. Secondly, the study provides insights for current CFL teachers who are exploring options on how to deliver online lessons successfully, and who also wish to establish a power base where teaching experiences are shared and teaching practices are endorsed. Thirdly, the study is expected to benefit CFL teacher education with recommendations for digital language teaching in the post-Covid-19 era.

2 Theoretical Framework

2.1 Language teacher belief

Studies about language teacher beliefs are a part of teacher cognition research. Teacher cognition research emerged in the late 1960s and early 1970s. At that time, teacher cognition research on language teaching was conceptualized largely behaviorally and language teachers were regarded as skilled workers or skilled technicians (Borg, 2006). This research saw language teachers as "technicians who needed merely to apply the right methods and tools in order for the learners to acquire the target language" (cited in Varghese, Morgan, Johnston & Johnson, 2005, p.24). At that time, the focus of early teacher cognition research was not on teachers as rational decision-makers. The goal of the research was to generate formal knowledge that other teachers could apply (Borg, 2006). Teachers' beliefs, thinking, and views were not key notions. In the 1980s, however, this view of teachers' behavior and skills started to become questioned. In the 1990s, teachers' knowledge, in particular teachers' pedagogical content knowledge (PCK) (Schulman, 1987), emerged as a major focus for teacher education. Teachers' PCK refers to "the manner when teachers perceive, interpret for teaching, and find different ways to represent and make subject knowledge accessible to learners" (Shulman, 1987, p. 9). The abundant interest in this field of research generated plenty of studies and publications in the field of language teacher education in the 1990s (see, e.g., Grossman, 1995). By the early 1990s, the pinnacle of language teacher cognition research was reached and soon after gave way to other kinds of researches.

When language classes become digital through using tools of CALL, TELL, and TALL, focus on teacher cognition research waned. It is proposed that the main sources contributing to the study of language teachers' cognition include teachers' prior language learning experiences, pre-service education, institutional atmosphere, teaching practice experiences, and student response. A key point to consider is teachers' diverse prior linguistic and cultural knowledge as potential resources for effective teaching (Derderian-Aghajanian & Wang, 2012; Sun & Mei, 2020). On one hand, classroom practices including teachers' decision-making and classroom implementations are shaped by teacher cognition.

On the other hand, teachers' backgrounds, be it from a linguistic or cultural basis, simultaneously influences teachers' practices.

2.2 Technological pedagogical content knowledge and digital competence in digital culture

Built on the work of Shulman (1996), Mishra and Koehler (2006) introduced the idea of technological pedagogical content knowledge (TPCK, also written as TPACK). The TPACK framework emphasizes the interactions between three elements: content, pedagogy, and technology. These three elements are important for developing good teaching practices as teachers utilize technologies effectively to teach content. Later work by Koehler and Mishra (2008) expanded the framework of TPACK into a situated form of knowledge, highlighting that successful technology integration requires teachers' understanding of the complex relationships among content, pedagogy and technology, as well as knowledge of the surrounding educational context, including knowledge about students, the school, the available infrastructure and the environment (Angeli & Valanides, 2015). While TPACK concentrates on the integrative body of knowledge, digital competence is broadly defined as "skills, knowledge, creativity and attitudes required to use digital media for learning and comprehension in a knowledge society" (Erstad, Kløvstad, Kristiansen & Søby 2005, p.7). By relating to teacher education, digital competence is described as comprising three key components: "basic digital skills, didactic digital competence, and learning strategies" (Røkenes & Krumsvik, 2016, p.3-4).

In a digital age, teachers strive to become fluent in using digital tools in a professional context with good pedagogical judgment, so as to better understand students' backgrounds and to navigate freely in digital culture (Erkmann, 2015; Krumsvik, 2011). Along with the wider availability and broader access to online teaching in the early 2000s, the term "Digital Culture" emerged and was thereafter applied to the field of education in computers, language, and teaching (Prensky, 2001). However, it is not until the late 2000s that the study of the interplay between digital culture and language education was established as its own strand of research in education (Gee & Hayes, 2011). We can consequently begin to question what digital culture truly is. Digital culture refers to "…deconstructing the old physical culture of socialization through digital technologies and developing a newer realm of online interaction and virtual reality that bypasses traditional gatekeepers of information." (cited from Wang & Winstead, 2016, p. xlvii).

This definition argues that in order to grasp the gist of digital culture, researchers need to deconstruct physical rooms where technology is properly applied and the internet remains uncensored and accessible. Wang and Winstead (2016) further clarified the fact that the process of digital communication intervened with traditional modes of communication. They also emphasized the importance of "digital socialization," through which learners developed their own power of authority. The power of authority can be understood in many ways. One way to understand it is by investigating the interplay between teachers' instructions and students' performance. In a face-to-face CFL classroom, the teacher corrects a student's mispronunciation, and thereafter requires him/her to re-pronounce it. Conversely, within the digital education culture, the virtual classroom has become a visionary space where a student does not necessarily go through the teacher's regulated consent to gain knowledge; instead, the student reads after a recorded voice and self-corrects the mispronunciation. This circumvention of the teacher's authority brings into question the teacher as both a transmitter and producer of knowledge.

3 The Study

The global lockdown of education institutions has caused a significant interruption in students' learning and major disruptions in teachers' teaching. Draconian policies enacted to combat the Covid-19 pandemic, including social distancing and those which discourage human-to-human contact affect the way people conduct research within the realms of academia. Given such circumstances, this study

employs a discovery-oriented qualitative approach (Kleining & Witt, 2001). This approach is largely drawn from personal narrative and ethnographic research from a sociological perspective. It is well suited to understanding the challenges that CFL teachers encounter and the professional issues they must reflect upon.

3.1 Study context

Denmark is one of the first European countries to close schools and universities in an attempt to curb the spread of the Covid-19 pandemic. The nationwide school closure sent record-high numbers of students and teachers back into their homes (Hopmann & Hopmann, 2020). This study investigates the perceptions and beliefs about digital teaching competence in a group of seven teachers who teach Chinese majors in multiple undergraduate and postgraduate programs in Denmark. The idea originated from meetings and online chats with fellow teachers in which questions around our own experiences of the sudden transition from face-to-face to screen-to-screen teaching emerged as a frequent topic of discussion. The need to share experiences and views, as well as the need to reflect upon the sudden shift and disruption of teaching that shaped our daily work, became critical in the midst of a pandemic.

3.2 Participants

Seven teachers were invited to join the study. They are the colleagues of the author. Four participants are Danes, i.e., non-native Chinese-speaking teachers: one of whom is an associate professor, while the other three are student teachers. The remaining three participants are native Chinese-speaking teachers; one of whom is from Taiwan, and the other two are from mainland China. To protect their privacy, each participant is ascribed to a pseudonym. The names in the data that experts quoted in the findings and discussion are the pseudonyms of the participants. All personal data, of which participants live and study, are deliberately vague.

Table 1.
Overview of Participants

Name	1st Language	Gender	Educational qualifications	TCFL experience	Job position
Eleanor	Danish	Female	PhD	20 years	Associate professor
Nick	Danish	Male	MA student	6 months	Student teacher
Simon	Danish	Male	MA student	1,5 years	Student teacher
Anna	Danish	Female	PhD student	6 months	Teacher assistant
Máo	Chinese	Female	PhD student	6 months	Teacher assistant
Chén	Chinese	Female	PhD student	6 months	Teacher assistant
Zhū	Chinese	Female	MA student	1 year	Trainee teacher

3.3 Data collection

Nationwide lockdown and draconian social policy changed the landscape of how we conduct qualitative research in the domain of social and educational fields. No face-to-face interviews and contact were possible under the circumstances of the lockdowns. Thanks to advances of the internet, online qualitative studies can be carried out and completed. One method to complete this study is to distribute electronic surveys to teachers involved once their consent has been established. The questionnaire is anonymous. Given the small size of participants, it is not possible to keep each participant's biodata impersonal. The

questionnaire is designed into two parts. The first part contains four sets of multiple-choice questions, with the intent to collect quantitative data about the participants' use of digital tools. For example, selecting recently used online tools; selecting activities that use TALL tools for online teaching; and elaboration on major benefits and problems of using TALL tools to teach Chinese. The second part of the questionnaire comprises six open-end questions, with the intent to elicit qualitative data about teachers' beliefs and perceptions of digital teaching competence. Open questions about the use of TALL tools and attitudes towards and concerns about developing teacher digital competence are posed.

3.4 Data analysis

Given the fact that the data consists of multiple-choice questions and verbal statements, the data analysis includes open and focused coding (Flick, 2009). The first step is to identify and to distinguish common answers to the first part of the quantitative data with the intent to identify emergent themes or patterns. Upon reading open questions several times, the second step is for the author of this study to search for the same or similar concepts expressed by the seven teachers. The third step is for the author to scrutinize the seven teachers' open-end-questions by adopting thematical analysis (Braun & Clarke, 2013). The thematical analysis searched for commonalities emerging from the teachers' accounts. It also underlined contrasting experiences and views. While scrutinizing open-end-questions, common themes through the lens of the theoretical framework underpinning the study was considered in order to gain an understanding of their accounts and to provide answers to the research questions. In other words, an exploration of what teachers believe, what they perceive, and what their attitudes are towards using digital tools in the emergency online teaching is sought after. The author participated in three teachers' virtual classrooms to conduct classroom observation. To guarantee the reliability of coding, triangulation of quantitative and qualitative data with observational data was performed. Due to logistical issues, observation of the other four teachers' online teaching was unavailable.

4 Findings

Three themes emerged from data analysis which is listed as follows: redefinition of digital language teaching; factors influencing teachers' development of digital competence, and a new normal for TCFL in the new future.

4.1 Redefining digital language pedagogy: Tools, tasks, and challenges

Covid-19 has shut down practically all face-to-face teaching across the world. Using TALL tools has become ubiquitous in classrooms and amongst teachers. What this study presents below is the major themes derived from the 1st type of data collection.

4.1.1 Digital tools for online teaching

As the general theme of the quantitative data, the notion of digital tool usage underpins all themes in the first type of data; it emerges as the aggregate of several aspects which defines digital language pedagogy.

Table 2.

User Frequency of Digital Tools for Online TCFL

Tools teachers most frequently use in recent online teaching	User frequency
Office software (Word, PPT, etc.)	39%
Audio/Video recordings	22%
Online learning tools (e.g, Kahoot, Quizlet)	11%
Other websites containing Chinese teaching/learning materials	11%
Resource sharing (e.g, Google doc, Dropbox)	6%
Communication websites (e.g, Skype, ZOOM, WeChat, Facebook)	6%
Online dictionary (e.g., Pleco, Skritter)	5%

Although the screen-to-screen teaching mode replaces face-to-face teaching, the percentage of user frequency indicates the teachers use Word and PPT, audio/video recording, and online learning tools to teach Chinese online more frequently than they teach in a traditional classroom. One participant, Nick, commented positively on using PPT or audio-video:

> I think online teaching is particularly good for teaching classes that requires student to focus on digital teaching material, such as PPT or video, since this type of material is often easier to follow for the students if they can see it right on their own computer. (Nick)

Use of resource sharing, such as Google Docs, makes it incredibly easy for both teachers and students to share documents across platforms and work on them together in real-time. Eleanor, who uses Google Docs much more frequently than before, commented:

> … it is very convenient to supervise and comment on written student group work, in e.g., a shared Google Doc or to listen in and talk with student groups during their oral or written work in Google Meets or Break-up groups in Black Board Collaborate. (Eleanor)

Eleanor's use of interactive digital tools reflected her beliefs that teaching became more convenient in an interactive environment, where teacher-student collaboration is highly favored. Integrating different digital tools into language teaching helps teachers to establish an environment that helps cultivate a meaningful experience.

4.1.2 Tasks of using digital tools for teaching

When asked what pedagogical tasks teachers use for online teaching, Table 3 provides a general picture of which teaching activities include the usage of digital tools by teachers.

Table 3.

Tasks CFL Teachers for Online Teaching

Tasks of using digital tools for TCFL	Use percentage
Managing classroom teaching	25%
Collecting and correcting assignments	21%
Preparing for teaching	21%
Creating teaching plan	21%
Designing extracurricular exercises	12%

In a face-to-face classroom, teaching, keeping students' attention, and guiding them through lessons takes constant effort and consumes plenty of time and energy out of teachers' daily tasks. The majority of participants find CFL can be taught efficiently online from the perspective of subject content knowledge, provided the teachers are given enough preparation time. The efficiency of an online classroom lies in taking advantage of pedagogical possibilities of online teaching, e.g., flexibility to cater for different learning styles, needs to motivate the students in many new ways. As teacher Máo put it:

> Digital teaching can facilitate students to send voice chat to me. I can give one-to-one feedback. The feedback is effective according to different levels of students. （数字化教学可以方便学生发语音给我，可以一对一的反馈，可以根据学生水平不同有效反馈）(Máo)

Teacher Chén shared views similar to Máo's.

> I think the software of modern video teaching is an advanced, reliable network, and we can share films synchronously. Therefore, the teaching effect can be almost the same as that of physical classroom-teaching. （我觉得现在的视讯教学软件都做得很好，连线畅通且可以即时同步分享影片，所以教学效果可以达到几乎与实体课堂教学相同。）(Chén)

Contrary to what Chén and Máo endorsed, Simon holds a slightly different view. He commented:

> Overall, I don't find online teaching more efficient than regular teaching. The digital teaching tools I find most efficient are those, which help to imitate a regular teaching environment, such as virtual whiteboard, sharing of documents and the split-into-groups functions etc. (Simon)

Teachers play an important role in deciding what tasks should be adopted. The survey data has found that these teachers prefer a teaching scenario similar to face-to-face teaching, despite the fact that digital tools can provide a myriad of possibilities that is impossible to replicate in teaching face-to-face. The reason for this is that most times teachers do not know how to integrate technology optimally into teaching subject content. Furthermore, the teachers lack TPACK sufficient enough to discern which teaching tasks are beneficial for students' learning.

4.1.3 Benefits and challenges of using digital tools for online teaching

The benefits of using digital tools for teaching language online are numerous, among which are those that capitalize on the innovative parts of language teaching. The majority of teachers involved in this study endorse six benefits: (a) increase teaching efficiency, (b) increase teaching quality; (c) increase students' learning motivation and interest; (d) allow for the inclusion of digital teaching tools (Google Docs, audio/video, social media, etc.) into online teaching; (e) cater for different learning styles and needs; (f) open new possibilities for language assessment. An additional issue that concerned teachers is a teacher's role in a digital learning context. Data shows that teachers are not overwhelmed or intimidated by the possible change in roles. The beliefs about teachers' roles as knowledge facilitators remained even when they entered a technology-dominant society. Zhū, however, believed that:

> One of the major benefits of using digital teaching tools for online teaching is to reinforce the role of a teacher, who is regarded as a knowledge transmitter (Zhū).

It is interesting to note that the teachers' role of being a knowledge transmitter is valued despite the

prevalence of online teaching. Another aspect under investigation is the challenges for teachers to use digital teaching tools online. Data shows that the first challenge was time. Creating and implementing a successful online lesson is time-consuming, especially for those who have rarely used digital teaching tools before. The teachers expressed two main concerns: (a) lack time to learn new digital tools; (b) learning a new digital tool increases teacher preparation time. The second challenge was the increased difficulty in maintaining students' enthusiasm for learning a language via screen-to-screen. In reference to the latter challenge, all teachers expressed their deep worries:

> I find classroom discussion difficult to facilitate. Generally, everything that involves interaction is difficult because it is often hard for student and teachers participating in a discussion to find out when it is their turn to speak. Another difficult aspect of teaching online is that it can be difficult to feel whether students have understood the material being taught since it can be hard to feel their emotions compared to teaching offline. (Nick)

> During the face-to-face classroom, the shy students can still feel the atmosphere and start to talk. But during online classroom, they are alone (Zhū).

> Generally, I think, the main difficulty with online teaching in comparison to face-to-face classroom teaching, lies in social interaction, rather than subject knowledge…I miss having eye contact with the students and from their body language to get a sense of how they perceive the teaching. (Eleanor)

> The most unsatisfactory thing about online teaching is that we can't get instant feedback and response from the students. (无法得到同学即时的反馈是线上教学最令人不满意的) (Chén)

While teachers endorse the benefits that online teaching has brought to us during the Covid-19 crisis, they are also made to reflect upon the pedagogical challenges that the pervasion of online teaching brings about. Without reflection, it is hard to understand what aspects of language teaching might be lost or replaced. Although teachers use functions of "hands-up", "unmute microphone" and "turn-on video" frequently to motivate the students, what they really miss while teaching online is immediate contact, a sense of being present, instant feedback, and in-person response characterized in a face-to-face teaching setting. Direct eye-contact, an encouraging smile and a friendly nod does wonders for both teachers and students alike. These simple moments connect two individuals emotionally and adds to the experience of being human. The uniqueness of feeling cared for and noticed cannot be replaced by computer emojis. This is the authenticity of human interaction and the originality of language teaching and learning.

4.2 CFL teachers' beliefs about digital competency

Teacher cognition research is concerned with understanding "what teachers think, know and believe" (Borg & Burns, 2008, p. 457). Its primary concern, therefore, lies within the "unobservable dimension of teaching – teachers' mental lives" (see Borg, 2006). It is thus the concept of "teacher cognition" that embraces teachers' beliefs, knowledge, thinking, attitudes, and some unobservable constructs. In the survey, the teachers were given three open questions aiming to clarify three different aspects: (1) teachers' beliefs about digital competence; (2) teachers' perception of what special competence they need to develop in order to cope with the change of teaching delivery; and (3) factors influencing teachers' development of digital competence.

4.2.1 Enhancing teacher's ability, awareness, and attitude (3A's)

Teachers' replies to what digital competence entails show that their beliefs about digital competence are comprehensive. They find it important and essential to foster the ability to apply digital tools into teaching, which adequately aligns with the three key points that composes digital competence (Røkenes & Krumsvik, 2016). It is interesting to note that the teachers highlight the importance of having open and agile attitudes to accept pedagogical changes. They also believe it is important to renew "pedagogical content knowledge". They emphasize the necessity to include the ability of using "digital tools and technological skills" in the existing framework to adapt to a new mode of teaching.

As shown below, teachers' beliefs about digital competence encompass three key elements: ability, awareness, and attitude (3 A's). Teachers' ability to use digital tools refers to their commands of and skills in integration of the digital and pedagogical know-how, focusing strongly on skills and abilities of combining technology, content, pedagogy, and context. It is important to note that teachers' awareness about the distinction between face-to-face and online teaching has an impact on teachers' use of digital competence in the classroom. Furthermore, they also find it vital to hold an agile and open attitude towards a new mode of teaching practice.

Table 4.

Teachers' Beliefs about Digital Competence

Ability	• A good command of a broad range of digital teaching tools (Simon)
	• Being skilled in using digital tools for teaching and know their function; (Nick)
	• Be able to use digital tools effectively according to different contexts, e.g., differentiating teaching materials and students (Anna)
	• The ability to use and take advantage of the didactic possibility available in online teaching; (Eleanor)
	• Ability to finish the class without any technical problems and try their best the make the atmosphere pleasant; (Zhū)
	• The ability to use digital media effectively and design appropriate teaching plans according to the characteristics of digital teaching (有效使用数字化媒体的能力，根据数字化教学的特点设计合适的教学方案的能力) (Máo)
	• The ability to learn digital software, from technology to experimentation. E.g., use computer training and audio equipment, upload teaching online, operate and become familiarized with functions of digital classrooms (学习数位工具软件的能力，从技术上 （使用电脑实训音讯设备、上传教学档案、熟悉数位教室功能） 到经验上) (Chén)
Awareness	• Awareness of fundamental differences between face-to-face teaching and online teaching (Nick)
Attitude	• Attitudes of being agile and attitude to being open for substituting practice (Anna)
	• all aspects of the response(全方面的应变)

4.2.2 Special competence needed: Teacher agency

The transition from face-to-face teaching to screen-to-screen teaching prompted special competencies

that teachers needed to develop. With the dominance of screen-to-screen teaching, pedagogical competencies teachers once possessed have changed. Increased ability to use technology and digital tools provides multiple teaching styles and multiple modes of communication and collaboration. Although teachers connect with students via digital platforms (e.g. Zoom, Skype and Blackboard Collaborator), and thereupon resume "normal" teaching, teachers' attitudes towards the transition are mixed. When asked what special competencies (s)he needed develop to cope with the change of teaching delivery, Nick put it:

> …it is central for teachers to acknowledge the fact that new ways of teaching, such as online teaching through digital tools, require them to adapt their teaching to the context. This involves the teacher taking on an open mindset where the teacher is not afraid to explore and find out what works and what does not…" (Nick)

In a similar vein, Simon and Chén expressed views as follows:

> … an open attitude and a willingness to see new possibilities are important competence to possess or to develop with the change of teaching delivery (Simon)

> We need to develop the capability of accepting new things. Teaching environments change all the time along with upgrades to technology, which requires teachers to learn continuously so as to utilize new teaching methods more effectively. (需要发展接受新事物的能力，教学环境一直在变，技术更新换代，这要求教师不断学习，更有效的利用新的教学手段) (Chén)

Instead of merely emphasizing the mastery of different teaching platforms and tools, teachers believe that having an exploratory spirit to experiment with pedagogical possibilities within online teaching matters in terms of developing teachers' digital competence. Advances and development within technology have prompted teachers to change, to learn new technology, and to alter teaching methods that were implemented pre-Covid-19. The impetus for teachers to change and to learn new knowledge lies in the importance of teacher beliefs towards the promotion of teacher agency (Biesta, Prisetley, & Robinson, 2015). Teacher agency refers to "a quality of the engagement of teachers with temporal-rational contexts-for-action" (ibid. p.626). It emphasizes teachers' beliefs, which are influenced by the *past*, are oriented towards the *future,* and engage with the *present*.

4.2.3 Two key factors: Institutional support and teacher's motivation

Key factors influencing teachers' development of digital competence include the following: (1) institutional support with appropriate allocated time, as well as specific instruction and teacher training to ensure continuous learning (e.g., introduction course to learning TALL tools, trouble-shooting ability); (2) teacher's motivation and willingness to improve online teaching. Institutional support should be available for teachers to engage in digital language learning development that supports instruction and research in their profession. Should this support be available, teachers would feel better prepared and confident in delivering screen-to-screen teaching. Nick said:

> …it is very important that teachers are first taught basic skills related to digital competence and have a fundamental understanding of digital competence… also attend course[s] in digital competence on an ongoing basis. It is vital that [the] teacher himself/herself is interested in developing his/her digital competence. (Nick)

Simon endorsed two keywords:

> Time is a huge factor. Learning to develop digital competence, as there is much to be learned from various websites including articles and videos, it can be very time-consuming, especially without prior knowledge or proper guidance and support. … one's attitude is an important factor. (Simon)

Teachers felt time pressure under which they had no other option but to convert entire teaching plans and curricula made for face-to-face classroom teaching into online teaching without prior notice, nor prior experience. This has meant that compromises had to be made by the teachers in planning and implementing online teaching. Another thing is that the teachers felt they had not received adequate support from institutions to update their existing pedagogical knowledge about online teaching. They discerned two key factors, i.e., institutional support and teachers' motivation, which played a role in promoting or inhibiting the development of teachers' digital competencies. Additionally, self-interest and prior knowledge play a particular "driving" or "motivating" role to achieve teachers' TPACK.

4.3 A new normal for teaching CFL in the new future

The Covid-19 pandemic has rewritten the process of traditional language teaching. Many underutilized technological features and platforms are more frequently utilized and diligently applied in various contexts of virtual classrooms. Broader and freer access to diversified modes of chat, audio, and visual language interaction blur the borderline between formal and informal learning environments. Thus, a new trend towards alternative modes of language teaching should be adopted in order to move beyond face-to-face language teaching and learning. In the midst of a pandemic, language teaching should mirror the blurred borderline of informal and formal learning modes as experienced via online digital tools. In the future, will screen-to-screen teaching replace traditional face-to-face teaching? Where does the new digital epoch drive the teacher's role in a technology-dominant classroom? These questions are really not about whether we need digital tools, but what we expect our future language teaching to be. Predictably, survey data reveals two issues worthy of further discussion. The first issue is concerned with teachers' disbelief about the possibility of online teaching after Covid-19. Both Anna and Eleanor shared a similar sentiment, commenting frankly:

> I don't think it will continue to be applied when the crisis is over. (Anna)

> I don't believe online teaching will be the new normal for language teaching in the near future. (Eleanor)

Unlike Eleanor and Anna, Nick and Máo expressed different views:

> I think we'll start to see more courses taught as a 'hybrid' where offline and online teaching is combined…. Now that everyone is getting used to online teaching, I think online teaching will be introduced more often in the future to offer more flexibility for students as well as for teachers… (Nick)

> I think although online teaching is now the new trend, the benefits of face-to-face teaching can hardly be replaced by online teaching, e.g., online teaching can't achieve a sense of communi-

cation and ritualism. (我觉得网课虽然是一种趋势，但是面授课程的优势，网课始终不能替代，例如，面对面教学中的交流感和仪式感，网课都很难达到) (Máo)

It is hard to think of any policy ever having been imposed on teachers so strictly with such little preparation. Closing down all face-to-face teaching was not a thought-out response, so much as a desperate measure in a desperate time. Although remote teaching may have to be sustained for months, teachers' frustration and worries will not remain as temporary issues. As lockdowns started, teachers have made compromises in planning and implementing online teaching, despite how underprepared they were pedagogically. In the early days of the pandemic, a few teachers foresaw the possibility of a "hybrid" method in teaching that would replace face-to-face teaching. Yet, as restrictions ease, new concerns have been haunting most teachers by a feeling of uncertainty with regards to the (dis)continuation of online teaching, i.e., how long will online teaching take? When can we go back to normal face-to-face teaching? When the university re-opens, will the teachers be required to integrate many pedagogical possibilities found in online teaching and try out new technology in face-to-face teaching? And will the abnormal emergency teaching become a new normal? Should it become normal, additional teachers' expertise and extra effort are required, not only within teaching content knowledge, but also within technological know-how. Notably, the change in the mindset of many teachers and students are needed, so that online teaching is not regarded as a poor and temporary substitute for face-to-face classroom teaching, but as a normal standard of daily teaching.

5 Discussion and Conclusion

The Covid-19 pandemic has changed the way language is taught and learned as well as our beliefs and perceptions toward language teaching. These changes to the basis of language teaching call for new definitions in the field of language education. As it follows, this study describes and discusses seven CFL teachers' beliefs about digital teaching competence while teaching online as well as their self-assessment on digital pedagogical teaching skills within a Danish context. Factors influencing teachers' development of digital competence as screen-to-screen teaching dominates face-to-face teaching are discussed as well. In light of the theoretical framework, the data presented in this paper indicates that teachers' beliefs matter in terms of the digital tools teachers use, as well as what tasks they use these tools for. The extent to which teachers are able to acquire digital competence depends on whether the teachers are allocated ample institutional time to upgrade their existing skills and how they exert their degree of teacher agency. Teacher cognition theory highlights what role teachers' beliefs play through teachers' self-assessment and self-reflection. Researching teachers' beliefs are important for their professional development, particularly in the midst of a pandemic, in that teachers' active consideration and critical reflection contribute to redefining CFL educational discourse.

As I have already recapitulated the answers to the first and second research questions (see 4.1 & 4.2, see Table 2, 3 & 4), I end this study with some concluding remarks by discussing overarching standards that CFL teacher educators need to provide for teachers to achieve digital didactic competence. Covid-19 has escalated the disuse of face-to-face teaching to the brink of elimination. In the past three months, we witnessed the possibility and potential for virtual teaching to be replaced by physical teaching. Rethinking the roles of online teaching and teachers' digital competence means to leave breathing space for teachers and teacher educators by setting up new standards. The three most important standards required for CFL teachers to achieve digital pedagogical competence are: (1) enhance teachers' "3 A's" (ability, awareness, and attitude) towards integrating particular curriculum content and design for differentiated teaching online; (2) strengthen teachers' capability to master new digital tools by providing ample institutional time; and (3) foster teacher agency, i.e., awareness and willingness to utilize TALL tools to extend time and space for flexible learning and differentiated teaching. As for teacher educators,

the overarching concept of the benefits and challenges for incorporating technology in teaching CFL should be emphasized, particularly the framework of PCK, which should be expanded to include TPACK in the trajectory of CFL teacher development.

Notably, the new standards prompted by Covid-19 should be juxtaposed against the backdrop of online language-teaching settings. Online teaching has clear potential. On one hand, challenges prompted by online teaching include lack of social interaction, difficulty in retaining students' attention, and inadequate instant feedback. On the other hand, increased access and multiple teaching modes make language teaching flexible and diversified. The new mode of online teaching provides opportunities for teachers to experiment with different teaching styles and test multiple modes of communication. Furthermore, advanced synchronized virtual teaching systems bind teachers and students together and permit individualized and differentiated language instruction as well as in collaborative formats. Given that "in front of your teacher" has been understood as "in front of your screen," Covid-19 has revolutionized Chinese language teaching and has drawn teacher virtually closer to student. Whether CFL teachers are ready to endorse or embrace this new era depends largely on the individual teacher's confidence in mastering digital teaching competence. But one thing is certain: the physical walls that separate traditional face-to-face classroom teaching and virtual screen-to-screen teaching have been dismantled.

Acknowledgements

References

Andrews, R., & Haythornthwaite, C. (2007). Introduction to E-learning research. In R. Andrews, & C. Haythornthwaite (Eds), *The SAGE handbook of E-learning research* (pp. 1-53). London: SAGE Publications.

Angeli, C., & Valanides, N. (2015). *Technological pedagogical content knowledge: exploring, developing and accessing TPCK.* New York: Springer.

Bai, J., Li, C., & Yeh, W.C. (2019). Integrating technology in the teaching of advanced Chinese. *Journal of Technology and Chinese Language Teaching,* 10 (1), 73-90.

Bech, M., & Knudsen, S. (2019). Virtual reality som katalysator for sproglig udvikling [Virtual reality as catalyst for language development], Roskilde University Press: Sprogforum, [Language Forum], 68, 77-86.

Biesta, G., Prisetley, M., & Robinson, S. (2015). The role of beliefs in teacher agency. *Teachers and Teaching: Theory and Practice*, 21(6), 624-640.

Borg, S. (2006). *Teacher cognition and language education: research and practice*. London: Continum.

Borg, S., & Burns, A. (2008). Integrating grammar in adult TESOL classrooms. *Applied Linguistics*, 29, 456-482.

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical gudie for beginners*. London: Sage.

Bremholm, J., Hansen, R., & Slot, M. (2018). Student work and the multimodal challenge: a mixed methods study of students' productive work in L1, science and mathematics. *L1 Educational studies in language and literature 18*, 1-27.

Bruun, A., & Zachariassen, D. (2020). Zoom-fatigue: hvad ved vi fra samtaleanalysen? [Zoom-fatigue: what do we know from conversation analysis?] Aarhus University, Denmark. Retrieved June 22, 2020. http://www.lingoblog.dk/zoom-fatigue-hvad-ved-vi-fra-samtaleanalysen/

Carrier, M., Damerow, R. M., & Bailey, K. M. (2017). *Digital langauge leanring and teaching: Research, theory and practice.* New York: Routledge.

Cuban, L. (2016). Strukturelle reformer på Las Montans og brugen af teknologi, 1976-2010 [Structural reforms at Las Montans and use of technology]. In L. Bundsgaard, & T. I. Hansen (Eds), *It-didaktik i teori og praksis: elevpositioner og digitale kompetencer i et dannelsesperspektiv* [*IT-didactic in theory and practice: pupils' positions and digital competence from a formational perspective*]. Frederikshavn: Dafolo.

Derderian-Aghajanian, A., & Wang, C. C. (2012). How culture affects on English language learners' (ELL's) outcomes, with Chinese and Middle Eastern Immigrant students. *International Journal of Business and Social Science*, 3(5), 172-180.

Erkmann, M. (2015). *Grundbog i digitale kompetencer* [*Primer of digital competences*]. Frederikshavn: Samfundslitteratur [Social Literature].

Erstad, K. & Kløvstal (2005). Digital skole hver dag – om helhetlig utvikling av digital kompetanse i grunnopplæringden [Digital school every day – the holistic development of digital competence in education]. ITU, Oslo, Norway, 7.

Flick, U. (2009). *An introduction to qualitative research* (4th edition). Sage.

Gee, J. P., & Hayes, E. R. (2011). *Language and learning in the digital age*. New York: Routledge.

Grossman, P. L. (1995). Teachers' knowledge. *International Encyclopedia of Teaching and Teacher Education*. Oxford: Elsevier, 1995.

Hirsch, B. (2012). Digital humanities and the place of pedagogy. In B. Hirsch (Ed.), *Digital humanities pedagogy: Practices, principles and politics* (pp. 3-30). Cambridge: Cambridge Open Book Publishers.

Hjuler, B. (2019). Læringsrummets fysiske rammer – gentagelse eller nytænkning? [The physical space of learning rooms: reception or novel thinking?], Roskilde University Press: Sprogforum [Language Forum] (68), 7-12.

Hoem, J. (2009). Memoz, et verktøy for spatielle nettpublisering: et forskningsprosjek knyttet til fremtidens læringsomgivelser [Memos - a tool for spacial net-publication: a research project attached to future learning environment]. *Nordic Journal of Digital Literacy 4 (2)*, 117-127.

Holland, V., & Fisher, F. (2008). *The path of speech technologies in computer assisted language learning: from research toward practice.* New York: Routledge.

Holmen, A. (2015). Sproglig diversitet blandt eleverne i grundskolen – fra problem til potentiale [Language diversity among pupils in primary schools]. In A. Gregersen (Ed.), *Sprogfag i forandring – pædagogik og praksis [Language subject in change – padagogy and practice]* (pp. 23-54). Frederiksberg: Samfundslitteratur [Social Literature].

Hopmann, S., & Hopmann, D. (2020, April 1). Professorer: Skolerne forværrer krisen med deres krav til forældre og elever [Professors: schools worsen the crisis with stringent demand towards parents and students]. Denmark: Berlingske [Berlingist News].

Kleining, G., & Witt, H. (2001). Discovery as basic methodology of qualitative and quantitative research. Forum: Qualitative Social Research, 2 (1), Retrieved June 25, 2020 from http://www.qualitative-research.net/index.php/fqs/article/view/977/2131, p.1-26.

Ko, M. (2017). Learner perspectives regarding device type in technology-assisted language learning. *Computer assisted language learning, 30(8)*, 844-863.

Koehler, M.J. & Mishra, P. (2008). Introducing TPCK. AACTE Committee on Innovation and Technology (Ed.), *The handbook of technological pedagogical content knowledge (TPCK) for educators* (pp.3-29). Mahwah, NJ: Lawrence Erlbaum Associates.

Krumsvik, R. (2011). Digital competence in Norwegian teacher education and schools. *Hogre utbildning* [*Higher Education*], 1 (1), 29-51.

Levy, M. (1997). *Computer-assisted Language Learning: context and conceptualization*. New York: Oxford University Press.

Lu, W. (2017). Jiyu yuancheng jiaoyu de duiwai hanyu jiaoxueyanjiu [Didactic research on remote TCFL]. China: yuwen jiaoxue tongxun, 962 (10), 68-69.

Ministry of Higher Education and Science. (2020). Retrieved June 25, 2020 from https://ufm.dk/en/education/recognition-and-transparency/transparency-tools/qualifications-frameworks/other-qualifications-frameworks/danish-qf-for-higher-education

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: a framework for teacher knowledge. *Teachers College Record*, 108 (6), 1017-1054.

Navarre, A. (2019). *Technology-enhance teaching and learning of Chinese as a foreign language*. Abingdon, Oxon: Routledge.

Petersen, K. (2014). *IT & digital medier i andetsprogundervisning: teori og praksis* [*IT and digital media in second language teaching*]. Aarhus: Aarhus Universitetsforlag [Aarhus University Press].

Prensky, M. (2001). Digital natives, digital immigrants: part I. *On the Horizon*, 9 (5), 1-6.

Røkenes, F. M., & Krumsvik, R. J. (2016). Prepared to teach ESL with ICT? A study of digital competence in Norwegian teacher education. *Computer and Education*, 97, 1-20.

Schulman, L. (1987). *Knowledge and teaching: foundations of the new reform*. Harvard Educational Review, 57 (1), 1-22.

Sun, P., & Mei, B. (2020). Modeling preserve Chinese-as-a-second/foreign-language teachers' adoption of educational technology: a technology acceptance perspective. *Computer Assisted Language Learning*, (*online journal*), 1-26. Retrieved June 25, 2020 from https://doi.org/10.1080/09588221.2020.1750430

Tannert, M., & Berthelsen, U. D. (2020). *Digital læremidler i danskfaget* [*Digital learning tools in teaching Danish subject*]. Aarhus: Aarhus Universitetsforlag [Aarhus University Press].

Thomas, M. (2009). *Handbook of research on Web 2.0 and second language learning*. Hershey: New York: Information Science Reference.

Varghese, M., Morgan, B., Johnston, B., & Johnson, K. (2005). Theorizing language teacher identity: three perspectives and beyond. *Journal of Language, Identity and Education*, 4 (1), 21-44.

Vygotsky, L. (1986). *Thought and language*. Cambridge, MA: MIT Press.

Wang, C. C., & Winstead, L. (2016). *Handbook of research on foreign language education in the digital age*. Beaverton, U.S.: Information Science Reference.

Xie, T. (2002). Using internet relay chat in teaching Chinese. *CALICO Journal 19(3)*, 513-524.

Yao, T. (1996). A review of some current computer-assisted language (CALL) for Chinese. In S. McGinnis, *Chinese language pedagogy: current perspectives of the merging field* (pp. 255-284). Columbus, Ohio: Foreign Language Publications.

Zhang, Z. (1998). CALL for Chinese: Issues and practice. *Journal of Chinese Language Teachers Association, 33 (1)*, 51-82.

Chun Zhang is an associate professor of Chinese at the School of Society and Culture, Aarhus University, Denmark. She is an experienced teacher and teacher educator in the field of teaching Chinese as a foreign language, and her research interests include learning strategies in language pedagogy and teacher identity and discourse in Chinese teacher education.