



Exploring the Impact of Online Teaching Factors on International Students' Control-Value Appraisals and Achievement Emotions in a Foreign Language Context

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Abstract Drawing upon Pekrun's (2006) control–value theory of achievement emotions, the present study explores the relations between online teaching factors (i.e., teachers' information and communications technology (ICT) competence and provision of structure) and students' control–value appraisals and achievement emotions (i.e., enjoyment, boredom, and anxiety) in an online foreign language learning context. Data were collected through semi-structured interviews with 12 international students and 6 teachers who were involved in a Chinese foreign language course delivered online during the coronavirus pandemic. Results from the thematic analysis showed that both students' and teachers' positive evaluations of teachers' ICT competence and provision of structure were associated with students' increased control beliefs and intrinsic value, but not necessarily with utility value. According to the participants, the two increased appraisals related to students' greater enjoyment and reduced feelings of boredom and anxiety during the online language learning process. Findings are discussed in light of the role of online teaching factors in shaping students' appraisals and emotional experiences in online environments, particularly during the coronavirus pandemic.

Keywords Teaching quality · Appraisals · Achievement emotions · Control–value theory · Foreign language learning · Online language learning

Introduction

During the spread of coronavirus disease 2019 (Covid-19), online courses emerged as a vital solution in foreign language (FL) teaching and learning with their advantages such as flexibility, convenience, and accessibility. However, this sudden transition to remote teaching and learning has placed students under considerable pressure, leading to the experience of negative emotions (e.g., anxiety and boredom) toward online language learning (Russell, 2020). Evidence so far suggests that students' positive and negative emotional experiences are directly related to learning outcomes including, but not limited to, self-regulation (Artino & Jones, 2012), commitment and retention (Xing et al., 2019), engagement (Ding & Zhao, 2020), and performance (Noteborn et al., 2012) in online learning environments. As such, it has become increasingly critical to investigate factors influencing students' emotions, especially in the context of online FL education, where replicating the interactional dynamics of traditional classrooms becomes challenging (Şahin Kızıllı, 2021). Furthermore, within the limited body of research that has explored these relations in the field of FL education (e.g., Dong, 2022), the focus has predominantly been on students studying English as a foreign language (EFL), with less attention given to students learning other common foreign languages such as Chinese, Japanese, or Spanish. Examining the factors influencing emotions in a broader online language learning context can undoubtedly enrich our knowledge and understanding of students' emotional

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experiences during the Covid-19 pandemic and beyond, which, in turn, may inform more effective strategies for supporting their learning and well-being.

Existing research highlights that aspects of online learning environments such as teachers' effective use of technology and appropriate pedagogical design can significantly improve students' learning experiences (Jang et al., 2010; Schmidt et al., 2009). For instance, teachers who possess strong information and communications technology (ICT) competence can increase students' technological efficacy, reduce technological anxiety, and facilitate their use of technology for effective online language learning (Fryer & Bovee, 2018). In a similar vein, teachers who adopt an effective pedagogical design can create a supportive and motivating learning environment that encourages students' active participation, curiosity, positive emotions, and engagement for online language learning (Darling-Aduana & Heinrich, 2018). Despite the importance of these online teaching factors, limited studies have empirically explored the impact of teachers' ICT competence and their provision of teaching structure on students' cognitive appraisals and emotions in the context of online FL learning (Shao et al., 2023a). This gap is particularly evident when considering both teachers' and students' perspectives, which can provide rich descriptions on the dynamics at play in online language learning. To address this limitation, a qualitative approach is essential as it allows for a detailed and nuanced examination of the relations between online teaching and learning outcomes as outlined above. The significance of investigating these relations has increased even more in the current FL context given that international undergraduates are now required to study Chinese as a foreign language in their home countries and pass the exams to obtain their degree in the format of online learning, a policy prompted by the Chinese government's response to the Covid-19 crisis.

Taken together, this study seeks to qualitatively explore the relations between two online teaching aspects: teachers' ICT competence and provision of structure, students' control–value appraisals and their achievement emotions (i.e., enjoyment, boredom, and anxiety). Specifically, it aims to explore the experiences and perceptions of two key stakeholders, teachers and students, who were part of an online foreign language course instigated by the Covid-19 pandemic. To achieve these aims, the research draws on Pekrun's (2006) control–value theory (CVT) of achievement emotions as a framework, which posits that learning environment and cognitive appraisals are distal and proximal antecedents of students' achievement emotions, respectively. It is essential to explore the interplay of the two layers of antecedents to better understand how emotions, which play a crucial role in important learning outcomes, are instigated in online learning environments.

Literature Review and Theoretical Framework

Emotions in Online Learning

Previous research has consistently shown that students frequently experience a spectrum of emotions in online learning environments ranging from positive ones like enjoyment and pride to negative ones such as anxiety and boredom (Dera-khshan et al., 2021; Pawlak et al., 2022; Resnik & Dewaele, 2023). This prevalent emotional aspect has prompted numerous studies to investigate the underlying factors, including control–value appraisals, prior knowledge, gender, and the learning environment, as well as potential outcomes of emotions such as engagement, learning strategies, and academic achievement (for more details, see Loderer et al., 2020). For instance, in their study, Butz et al. (2015) compared synchronous hybrid students who attended online vs. on-campus in terms of control, value, emotions, and perceived success. They found that online students experienced heightened levels of technology-related anger, anxiety, and helplessness when compared to their on-campus counterparts. These emotions were significantly linked to students' perceived success in both program achievement and technology use and they mediated the link between control–value appraisals and perceived success. In another study, You and Kang (2014) examined the relations between Korean college students' perceived academic control and their emotions (i.e., enjoyment, anxiety, and boredom) and self-regulated learning in online courses. They found that enjoyment mediated the link between perceived academic control and self-regulated learning, and that boredom and anxiety showed significant moderating effects in the link between perceived academic control and self-regulated learning. These studies indicate that students' positive and negative emotional experiences can significantly impact various online learning outcomes. Moreover, these emotional experiences can also be considered as significant outcomes themselves, and they may be influenced by various other important factors. Understanding these dynamics can offer valuable insights into assessing the overall effectiveness of online learning, particularly in the context of FL learning.

In response to the Covid-19 pandemic, there has been a sudden shift toward online education, which intensified the role of emotions in this evolving landscape (Hilliard et al., 2020; Zhang & Lin, 2020). Studies have shown that this shift could lead to various adverse effects on students' mental health and emotions. For instance, university students frequently reported experiencing an increase in their levels of stress, anxiety, and feelings of depression throughout the Covid-19 pandemic (Saravanan et al., 2020). On the other hand, many educators, including language teachers, also had to adapt from in-person instruction to an online teaching format, without sufficient preparation, support or resources.

Given the demands that technology integration places on teachers, it is not surprising that they also faced significant challenges in adapting to online teaching. In their study, for instance, Hu and Xie (2020) investigated online teaching quality during the Covid-19 pandemic among 57 universities in China. Their findings revealed that neither teachers nor students were familiar with online instruction; the teaching design and structure did not align with students' expectations; and students faced difficulties in regulating their own learning. It is conceivable that such teaching conditions can exert a negative influence on students' emotional experiences, possibly leading to increased feelings of distress, which can, in turn, impact their performance in online FL learning (see Jung et al., 2012). Given the significant impact of online teaching practices on students' emotional experiences, it is crucial to investigate these, particularly within the context of learning Chinese as a foreign language, which is known for its high level of complexity and difficulty.

Teachers' ICT Competence

Teachers' ICT competence can be conceptualized as a "series of knowledge and skills that teachers must acquire in various technological resources so they can introduce them completely into their teaching practice" (Almerich et al., 2016, p. 112). The effectiveness of online teaching is highly dependent on teachers' ICT competence. This complex and multifaceted phenomenon suggests that teachers need not only to possess knowledge of technology, content, and pedagogy but also to understand how these aspects are interconnected (Schmidt et al., 2009). Previous research has shown that teachers with greater ICT competence can create a motivating online learning environment and promote student access, engagement, control, value beliefs, and academic achievement (Darling-Aduana & Heinrich, 2018; Fryer & Bovee, 2016, 2018).

In the challenging landscape of the Covid-19 pandemic, the perceived competence of teachers, including their ability to provide both technological and pedagogical guidance and support, has become significantly important for students' online learning experiences. In such a situation, students may expect that their teachers have the necessary technological skills to go beyond simply transferring traditional lectures to a new online platform. They may need more than ever for their teachers to design innovative courses with engaging features and provide responsive and timely feedback, especially considering the constraints of online learning environments (see Resnik & Dewaele, 2023). This places a substantial demand on teachers as they are required to swiftly integrate pedagogical content, create structured lessons, and use technology effectively within a limited time frame. However, if achieved, such competence plays a key role in creating a positive learning environment as it can help

reduce students' anxiety and distress related to online learning while also enhancing their motivation and engagement (Hicks et al., 2023). For instance, recent studies have demonstrated that students' perceptions of teachers' active role in online courses such as being more present and establishing interactive dialogues, help students keep track of time, reduce their anxiety, and improve online learning efficacy and satisfaction, especially in the context of language learning (Aysel, 2021).

Teachers' Provision of Structure

Teachers' provision of structure refers to "the amount and clarity of the information teachers provide to students about what is expected and how they can realize those expectations" (Reeve, 2009, p. 163). In a well-structured learning environment, teachers are expected to provide structure by (a) setting and communicating clear rules and expectations to students, (b) monitoring students' progress and providing them with appropriate guidance during a learning activity, and (c) evaluating students' performance and giving effective feedback after a learning activity (Jang et al., 2010). Empirical evidence suggests that teaching structure in online learning environments is closely associated with students' learning experiences and performance. For instance, in a study with 226 Japanese university students, Jung et al. (2012) revealed that chaotic instructional design (e.g., lack of clear expectation for group tasks) was one of the most important stress factors for students engaging in online collaboration tasks using English as the main medium of discourse. In contrast, Gold and Windscheid's (2020) study showed that a well-designed online classroom with good teaching practices such as monitoring student behavior and managing instruction pace is positively related to students' positive emotions but negatively related to their negative emotions.

In online settings, there is an increased demand for well-designed and effectively managed courses. This demand is particularly relevant to language-related subjects, which often require substantial interaction between teachers and students (Zhang & Lin, 2020). However, similar to the concerns regarding teachers' ICT competence, the ability of teachers to provide well-structured online classes has been significantly impacted by the Covid-19 outbreak. The pandemic has disrupted traditional teaching practices, leaving teachers with limited time to adapt and create carefully designed online courses for their students (Moorhouse & Kohnke, 2021). It is plausible that these rushed practices may lead to students perceiving the teaching structure negatively. Such perceptions can potentially reduce their sense of control over the learning process and their overall satisfaction with online learning. They may also result in increased student anxiety and similar less productive learning

behaviors (Hicks et al., 2023). These further highlight the importance of examining pandemic-induced online FL teaching practices and their impact on students' emotional experiences. It is particularly important to investigate these from the perspectives of both teachers and students as this will enable us to make well-informed pedagogical improvements and enhance the overall online learning experience.

Control–Value Theory of Achievement Emotions

The present study draws upon the control–value theory (CVT) of achievement emotions as a theoretical framework to examine the relations between perceived online teaching practices, students' perceived control and value, and achievement emotions in an online learning environment. Achievement emotions can be defined as emotions that are directly tied to achievement activities or achievement outcomes (Pekrun, 2006). In educational contexts, students can experience a diverse range of distinct achievement emotions (e.g., enjoyment, hope, pride, anxiety, shame, and boredom) which can be categorized along three dimensions: focus (activity focused vs. outcome focused), valence (positive vs. negative), and activation (activating vs. deactivating). The current study focused specifically on three of these achievement emotions: enjoyment (activity focused, positive, and activating), anxiety (outcome focused, negative, and activating), and boredom (activity focused, negative, and deactivating). These emotions represent three typical categories of achievement emotions and are frequently reported as the most common emotions in language classes (see Shao & Parkinson, 2021). Enjoyment has received significant scholarly attention recently as a prevalent positive emotion in FL learning (Derakhshan & Fathi, 2023; Shao et al., 2019). On the other hand, anxiety (Kutuk et al., 2022; Resnik et al., 2023) and boredom (Derakhshan et al., 2022; Pawlak et al., 2022) are reported as being the most studied and observed negative emotions that students experience in language classes.

According to CVT, achievement emotions are triggered by both proximal and distal antecedents. Individuals' cognitive appraisals of control and value function as proximal antecedents. Perceived control refers to the degree to which individuals believe that they are able to exert causal influence over their learning activities or outcomes. Perceived value refers to the importance that individuals subjectively attribute to their learning activities and outcomes (Pekrun & Perry, 2014). Value can be further differentiated by three types: intrinsic (e.g., learning is interesting), attainment (e.g., achieving success is important), and utility (e.g., learning is useful for future career). Different levels of control and value evoke different achievement emotions. For instance, high control and value can induce enjoyment while low control and high value can elicit anxiety. Boredom can arise

from either low or high control (over-challenge or under-challenge) and low value. Regarding distal antecedents, CVT posits that the learning environment, encompassing various aspects such as teaching characteristics, is regarded as a distal antecedent of achievement emotions. Distal antecedents can have direct or indirect effects on students' emotions via control and value appraisals (Pekrun, 2006).

Previous studies have already provided evidence for these assumptions (Shao et al., 2020; Shao et al., 2023b). Among these, Goetz et al. (2019) examined how students' perceptions of teaching, including aspects like a supportive presentation style and demanding lessons, relate to their achievement emotions, such as enjoyment, anxiety, and boredom. Their study found that students' appraisals of control and value played a mediating role in the relationship between these teaching characteristics and students' emotions. For instance, a supportive presentation style was linked to a greater sense of control, which, in turn, contributed to higher levels of enjoyment. These findings align with the CVT and shed light on the role of teaching characteristics and cognitive appraisals in shaping students' emotional experiences. However, it is worth noting that most of these studies were conducted in traditional in-person classrooms, with a predominant focus on STEM subjects. They may, therefore, not fully address the nuances of online learning environments, where different teaching dynamics come into play. This further highlights the need to explore the theoretical link between achievement emotions and their distal and proximal antecedents in online learning environments and extend this network of relationships into the relatively less-studied context of FL learning.

As a few notable exceptions, Yang et al. (2021) investigated Chinese FL learners' achievement emotions and their antecedents in an online language learning environment instigated by the Covid-19 pandemic. The qualitative results showed that students experienced a variety of different achievement emotions including enjoyment, anxiety, and boredom, and that these emotions were mainly induced by the environmental (e.g., teacher factors) and individual antecedents (e.g., control–value appraisals). Recently, Shao et al. (2023a) have demonstrated that perceived teacher ICT competence had positive effects on students' enjoyment, but negative effects on anxiety and boredom, and these effects were fully mediated by perceived control and/or value. In contrast, perceived chaotic teaching structure had opposite effects on these emotions and the effects were fully or partially mediated by perceived control depending on the emotion. While these studies offer valuable insights, they are subject to three main limitations. First, the data collection methods in these studies solely relied on student interviews or self-report questionnaires, without considering the perspectives of teachers regarding the relationships between achievement emotions and their underlying factors in online

FL learning. Second, these studies have predominantly focused on the context of EFL, leaving a gap in our understanding of how these relationships manifest in different FL contexts. Third, the mediation chain identified in the quantitative study was based on cross-sectional data, preventing a comprehensive understanding of the processes through which appraisals mediate the link between teaching factors and achievement emotions. In light of these limitations, the present study aimed to investigate the impact of teachers' ICT competence and provision of structure on students' enjoyment, anxiety, and boredom in learning Chinese as a foreign language online from both teachers' and students' perspectives. Employing a qualitative approach, we specifically addressed the following research questions:

- RQ1 How do students and teachers perceive the association between teachers' ICT competence and learners' appraisals of control and value, as well as their achievement emotions in an online FL learning context?
- RQ2 How do students and teachers perceive the association between teachers' provision of structure and learners' appraisals of control and value, as well as their achievement emotions in an online FL learning context?

Method

Participants and Procedure

There were two groups of participants in this study. For the first group, 12 students, including 6 women and 6 men aged between 18 and 20, were chosen through stratified convenience sampling method. The data collection process was overseen by one of the teachers responsible for the online Chinese as a foreign language course. To control the possible influence of FL proficiency on students' appraisals and emotions, we asked four teachers in respective classes to recommend three participants based on their levels of Chinese proficiency (low, intermediate, high). The students came from diverse nationalities and spoke different native languages. They were from Uzbekistan ($n = 2$), Morocco ($n = 1$), Indonesia ($n = 2$), Malaysia ($n = 1$), Britain ($n = 1$), Bangladesh ($n = 2$), Pakistan ($n = 2$), and India ($n = 1$). These students studied various science and technology majors (e.g., electronics and engineering; information and communication technologies; computer science) in a university located in Southeastern China. To fulfill their undergraduate degree requirement, they were required to study Chinese as a foreign language and pass the course exam. Although participants had 1 or 2 years of previous Chinese learning experience, they had

never learned Chinese online prior to attending this course. At the time of the data collection, they had been studying Chinese as a foreign language online for 6–8 months.

For the second group, six native Chinese language teachers who taught the online Chinese language courses to the aforementioned students were recruited via convenience sampling. All of the teachers were women, ranging in age from 33 to 53 years old and had taught various Chinese language courses to international students for 5–12 years. Three teachers had a master's degree in FL education while the other three had a doctoral degree. Similar to the student participants, the teacher participants also lacked any prior online language teaching experience before the onset of the Covid-19 pandemic.

Data were collected through semi-structured interviews, focusing on two main areas: (1) the relations between teachers' ICT competence, students' control–value appraisals, and achievement emotions, and (2) the relations between teachers' provision of structure, students' control–value appraisals, and achievement emotions. The interview questions were developed drawing upon existing research and the study's theoretical framework (see Fig. 1). To capture the perspectives of both teachers and students effectively, the phrasing of the questions was adjusted for each group while keeping the original content consistent across the groups. For instance, a question such as 'How long have you been teaching Chinese as a foreign language online?' which was intended for the teacher participants was rephrased as 'How long have you been learning Chinese as a foreign language online?' to better suit the context and experiences of the student participants (see Appendix S1 and S2 for additional sample interview questions). Participants provided informed consent, and the interviews were conducted online via Zoom or DingDing. Each interview lasted 45–60 min, allowing participants to share additional thoughts on online language learning. The interviews were audio-recorded and transcribed verbatim. All interviews were conducted in the English language. The study received ethical approval from the Research Ethics Committee at the first author's university.

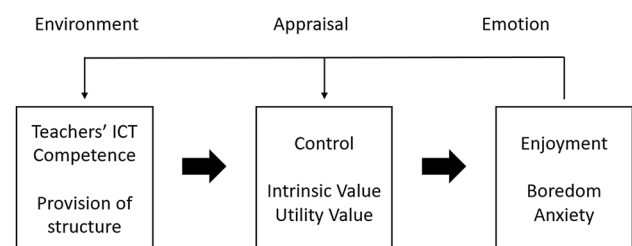


Fig. 1 Adapted from Pekrun (2006)

Data Analysis

To ensure a thorough and rigorous analysis, we followed Braun and Clarke's (2006) six-phase thematic analysis approach. First, we familiarized ourselves with the data by reading the transcripts multiple times and noting relevant points (Phase 1). Next, we conducted systematic coding of the transcripts, identifying recurring semantic similarities through an iterative process (Phase 2). The codes were then organized into broader themes and sub-themes, with illustrative quotes linked to each theme (Phase 3). The coherence and consistency of the themes were checked by two researchers (Phase 4). Once the identification and naming of the themes were finalized, we proceeded to produce the detailed data analysis report (Phase 5 and 6). The interview schedule and study results were guided by the control-value theory of achievement emotions (Pekrun, 2006). Utilizing this framework, we identified five interconnected themes in the interviews: (1) teachers' ICT competence, (2) teachers' provision of structure, (3) students' sense of control, (4) students' value appraisals, and (5) students' achievement emotions (See Appendix S3 for an example analytical process of these themes).

Results

Relations Between Teachers' ICT Competence and Learners' Appraisals and Achievement Emotions

Teachers' ICT Competence and Learners' Appraisals

Interview data showed that teachers' knowledge and skills in utilizing a variety of different technologies in their teaching practice were perceived to be essential to create an effective online learning environment. This was particularly evident for fostering students' appraisal of control. For instance, when asked about the potential impact that teachers' ICT competence may have, Rafiq, a student participant, highlighted that although he was initially sceptical about learning a foreign language online, his teacher's ability to use technology effectively in their classes made a significant difference in his confidence enhancing his control over his online learning. He stated that:

Well, I just think that if I keep learning online, I can actually learn something...learn more than what I thought before I started learning online. My teacher is good at using technology to teach us Chinese in online courses. Now, I just have more confidence...

Teacher participants echoed similar views on the importance of teachers' ICT competence in facilitating students'

online learning experience, particularly for their appraisals of control. As noted by Jenna:

I think if I use the technology with competence, they [students] would be more confident with learning the language. When I'm using the technologies more effectively, maybe they could focus on the class instead of spending a lot of time trying to fix technological problems, and they would feel that they are in control as well.

Jenna's response illustrates how she believes that her ability to use technology competently could positively affect her students' control over their online language learning. She highlights the importance of effective use of technology in minimizing the pertinent technological issues that may arise while teaching. Such competence allows students to focus on the content of the class, and ultimately feeling in control of their learning experience.

Students also expressed that teachers' ICT competence (or lack thereof) could significantly affect the intrinsic value they ascribed to learning Chinese as a foreign language. During his interview, Mikhail explained how his teacher's lack of knowledge and skills would negatively affect his interest in learning the Chinese language online:

...if the teacher was not good at handling the platform in which we are learning Chinese or at handling the class, it would make me feel more disappointed at learning language...and maybe would not have good results learning Chinese...but since our teacher is not bad at it, I guess that's one of the reasons why I feel some sort of passion at learning language.

Expanding on her earlier point, the teacher participant, Jenna, emphasized the role of teachers' ICT competence in enhancing students' interest in online language learning. She explained how teachers who are skilled in using technology can help students identify areas for improvement in their language skills and engage them in activities that make effective use of technology facilitating impactful language learning experiences. When asked for a concrete example from her lessons, she shared.

...I thought that using the WeChat would be a good way [to teach correct pronunciation] ... WeChat could transform what students said in a voice message into the text... I want them to see that when WeChat fails to translate their voice message into the correct Chinese character, that maybe because there is something...not really good with their pronunciation...I think that's one way...how I use the technologies in class to help students see what needs to be improved in their pronunciation, and certainly

students...found their mistakes, and I think...they were quite interested in this activity.

On the other hand, the student participant Rafiq provided a different perspective, arguing that his teacher's ICT competence would matter only when his appraisal of intrinsic value was high enough for learning a new language. As he indicated:

...if I am not very excited and interested to learn some language, the teachers' competence...is not going to make me interested...The language has to be interesting...you feel interested by the language before you start learning it.

This further supports the reciprocal relations between the study variables within the CVT framework (Pekrun & Perry, 2014).

In contrast, participants perceived no strong relationship between teachers' ICT competence and the utility value of online Chinese language learning. The teacher participant, Jenna, for instance, explained that her students' perception of the importance of language learning was primarily related to practical reasons, such as academic and career opportunities. Therefore, she did not believe that her ability to use technology effectively would significantly influence the utility value that her students ascribed to learning the Chinese language online. Similarly, another teacher, Quyen, also pointed out that there are more important factors that may affect students' appraisal of utility value, such as students' motivation to learn Chinese and the emotional support and understanding they receive from their teachers during their online language learning. Emphasizing the importance of building a connection and sense of community in online settings, Quyen further added that:

...the most important thing is that you have something in common to help each other build a real connection [between the teacher and the students], that is the most significant part in online teaching.

Teachers' ICT Competence and Achievement Emotions

As revealed by the interviews, both teachers and students believed that teachers' ICT competence can influence students' achievement emotions. Students tend to enjoy the classes more and have fewer experiences with the negative emotions such as boredom and anxiety when they perceive their teachers as efficient in using technology in their online language classes. Mikhail, for instance, was one of the student participants that explicitly described how his teacher's ICT competence affected his emotions during the class:

I'm mostly enjoying the class when our teacher is handling everything well and boredom is not an issue

when the class is being handled by the competent teacher. Also, I don't feel anxious or worried about anything...So whenever I feel like the class has been effective and when I actually get some progress in learning Chinese language, I feel enjoyment...

Consistent with the CVT's mediation assumption, students provided further insights into how teachers' ICT competence influenced their achievement emotions (i.e., enjoyment, boredom, and anxiety) directly or indirectly through control and value appraisals. For instance, building on their earlier explanations of how their teachers' ICT competence could influence their appraisals of control and value, Mikhail and Rafiq shed light on its subsequent influence on their emotions:

...as a matter of fact whenever I feel less confident, I get more anxious, I get more frustrated or even lost in the situation...I guess the higher my confidence is, the better my emotions are. (Mikhail)

More interested, to me, is more joy...the other two emotions, they decrease a little bit like boredom because actually, you are more motivated...It makes it more fun. (Rafiq)

In another student interview, Latif mentioned that he was often anxious during the classes not due to the teaching factors per se, but due to the technical issues he experienced. He explained that:

I think that [anxiety] happens when the internet connection doesn't work. When my teacher asked me questions and I got interrupted because of bad internet connection, that really throws me off. I have to request my teacher to say that again, so that's something really awful to me.

While Latif's statement may not explicitly discuss the influence of teachers' ICT competence, it indirectly highlights the importance of the role of teachers in handling such technical issues. Teachers with a high level of ICT competence are better equipped to navigate such challenges and help students experience anxiety less frequently during their online language learning.

Furthermore, teachers who excel in providing structure can also manage these situations well. For instance, reflecting on her online teaching, one of the teacher participants openly acknowledged their limitations in technology. However, rather than viewing her lack of technological proficiency as a hindrance, she described how she employed a pedagogical strategy to leverage the collective knowledge and skills within the classroom. She stated that:

I'm not a good technology person. I just find it not so easy for me to pick up on new technologies. When students need help, I encourage them to help each other...

I ask the students in the class who can do it very well to help these students, and also sometimes I will ask my colleagues who can do.

This teacher's approach highlights the crucial role teachers play in establishing an organized and supportive online learning environment. They are key to a more structured and effective educational experience, particularly when addressing technology-related challenges. It also further evidences the strong correlation between teachers' ICT competence and provision of clear teaching structure (Shao et al., 2023a, 2023b).

Relations Between Teachers' Provision of Structure and Learners' Appraisals and Achievement Emotions

Teachers' Provision of Structure and Learners' Appraisals

Both students and teachers emphasized the importance of a well-designed online learning environments for promoting students' appraisals of control. They also identified several ways in which the provision of a clear teaching structure (or lack thereof) might influence students' appraisal of control. For instance, according to Arif, a student participant, the provision of structure helped him follow the lessons more effectively and grasp the language topics more quickly. He, therefore, concluded that:

Well, teaching structure has an influence on language learning in general. If the teaching structure is bad, students will not be able to understand very well. A good teaching structure can help students learn a lot...

In comparison to Arif's emphasis on a general sense of control over the learning process, another student participant, Latif, focused more on the impact of structure on his sense of control over his own learning outcomes. Latif expressed that a clear and organized online course structure would enable him to achieve his goals, such as finishing the course within a specific time frame by increasing his overall confidence in online language learning:

If the class is well-structured...I am confident I can finish this course in ten weeks. This is really a good thing to improve my learning experience and achieve my goals.

These findings highlight the need for teachers to prioritize a structured approach to teaching and learning in online language courses, ultimately benefiting students' overall learning experience and learning outcomes. Acknowledging the importance of such an approach for students' sense of control, Jiang, the teacher participant, explained how she integrated supportive measures, including offering assistance and positive feedback, to boost students' confidence during

her lessons. For instance, Jiang noted that her students may struggle with unfamiliar words or experience pronunciation issues when reading a text, which can have a negative impact on their confidence. To address this, she provides feedback to students by pointing out errors on the spot and providing encouragement when they read fluently with good pronunciation, stating "*I encourage them by saying 'good job' or 'well done', so they will gain confidence.*"

Regarding the appraisals of value, the participants agreed that the level of teaching structure could have a considerable impact on the intrinsic value that students placed on online language learning. In an online environment where students face additional challenges in staying engaged and interested, a clear learning structure or framework, integrated with thoughtful topics, helps students connect new knowledge to their existing understanding and recognize the relevance of what they are learning. Consequently, they develop a deeper interest in the subject matter. For instance, the teacher participant, Xiang, highlighted the positive impact of aligning teaching structure with students' background knowledge. An example of this was when she asked her students to write about the colors and their meanings in their respective cultures and countries in the Chinese language. Xiang observed that her students, being knowledgeable about their own culture and country, were engaged and responded quickly to this task. Xiang managed to leverage her students' interest and create a more engaging and interactive online learning experience by incorporating content that resonates with their cultural backgrounds. As she explained:

They [students] show their culture in the Chinese language. For them, it is very interesting, so I try to find some interesting topics to increase their interest.

These findings indicate that teachers who provide clear guidelines, organize activities, and use appropriate teaching methods and materials can help students feel more in control and interested, leading to more positive emotions like enjoyment and less negative ones like boredom or anxiety. However, overall findings indicated a lack of a direct association between the provision of teaching structure and utility value in online language learning from the participants' point of view. For instance, when asked about whether teachers' provision of structure would influence the importance of online language learning for him, Mikhail indicated that he did not see an explicit link between them. Instead, he directly linked it to his emotions during class suggesting a potential direct influence as he indicated:

I believe language learning is important no matter how bad the teaching structure is and if our teacher was bad at teaching us Chinese, I would just go on and learn on my own and participate in the classes any way but I would be less enjoying them, but still I would

learn the language no matter how bad the teaching structure would be...I wouldn't enjoy the lessons, but this wouldn't change my views about the importance of language learning.

Teachers' Provision of Structure and Achievement Emotions

The interview data provided insights into how teachers' provision of structure influenced emotions directly or indirectly through the appraisals of control and intrinsic value. For instance, one of the teacher participants, Bella, described how selecting appropriate teaching materials based on students' level can help foster a positive learning experience by promoting a sense of control for the students:

I am not happy with the textbook only...I find some supplementary materials to help my students, for instance, reading materials. The upper-level students would feel...enjoyment because they learn much more than the textbook. But the middle-level students, they would feel...difficulty because there are more difficult expressions than the textbook. Probably they would feel oppressed. For the comparatively lower-level students, they'd probably feel "Oh, that's too hard for me, it is boring, I just don't want to do it. I just want to finish the textbook"

Bella's suggestion to supplement the classroom with additional materials could also potentially address the issues highlighted by another student, Mikhail, such as increased boredom due to repetitive teaching structures. Reflecting on the online lessons he attended previously, Mikhail complained about doing the same activities during the online language classes and expressed that this made the classes boring for him:

To be honest, the beginning of the class takes a while because when we are already supposed to start classes, we wait for about half an hour for students to gather, which is kind of boring...when the class starts, another half an hour I spend on listening to the recording of conversations...conversations from the previous lessons that we listened for many times which makes the class boring

Furthermore, in the interviews conducted, an additional aspect in relation to teachers' provision of structure was mentioned by some of the teacher and student participants. They emphasized the importance of building a strong rapport and creating a sense of community in the context of online language learning. For instance, according to one of the students, Latif, the time, care, and attention invested by the teacher during online language classes have a direct

and tangible impact on his emotions in the online language learning process. As he explained:

When the teacher asks about me, whether I can understand something, it feels like she wants to interact with me, she cares about me. It is really a nice feeling. I really enjoy it...I think when the teacher can give us the time, care and attention that we need, it can increase my enjoyment for online language learning, but decrease my anxiety and boredom.

This is further supported by the teacher interviews and when asked about how they establish a strong connection with students online, one of the teachers, Bianca, explained that she showed genuine interest in her students' lives and paid close attention to making students relaxed during the classes:

I ask them some questions about their personal lives. Usually, they say they are happy to share with me, with each other... I make some jokes and...some students joke me back

Building rapport and trust is indeed closely related to teachers' effective provision of structure in online settings. When there is a strong connection between teachers and students, students are more likely to engage and participate in the classes which can, in turn, improve their understanding of the lessons and activities. As one of the student participants, Rafiq, noted when everything is clear, it may allow students to focus on their learning and feel more confident in their ability to comprehend what is expected from them. This could potentially influence their emotions by, for instance, reducing their anxiety and increasing their enjoyment. As Rafiq stated:

[When the teaching structure is clear] you are more confident, of course...I feel more like...there is more joy. It is more related to joy more than the other emotions [boredom and anxiety].

Discussion

Based on Pekrun's (2006) control-value theory (CVT) of achievement emotions, the present study examined the associations between online teaching aspects (i.e., teachers' ICT competence and provision of teaching structure), students' control and value appraisals and achievement emotions (i.e., enjoyment, anxiety, and boredom) using semi-structured interviews with FL students and teachers. The findings of the current study, in general, support the principles of CVT which proposes that aspects of a learning environment such as teaching characteristics are distal antecedents of achievement emotions and that they are associated with students'

emotions directly or indirectly via students' perceived control and value on achievement activities and outcomes.

Regarding our first research question, we found that the student participants were generally content with their teachers' ICT competence and perceived it as an important element of their affective experiences in online language learning. Accordingly, they reported that their teachers' high ICT competence enhanced their control beliefs and increased intrinsic value with respect to online FL learning. Higher level of perceived control and intrinsic value, in turn, led them to enjoy more and feel less anxious or bored during the online language learning process. The findings were further supported by the teacher interviews. While many teachers shared their reflections on the unprecedented experience of transitioning to online teaching for the first time in their careers, they explained how they quickly adapted to the new online environment and embraced the alternative teaching strategies and technologies to engage their students more effectively. They all agreed that their effective and smart use of technology can improve students' confidence and interest for online FL learning, and directly or indirectly boost students' enjoyment and reduce their anxiety or boredom in online classes. Overall, these findings parallel previous literature suggesting that teachers' pedagogical and technological ability may influence students' perceived control beliefs and the value that they ascribe to learning in online learning environments (Jung et al., 2019). They also corroborate with CVT which posits that when students feel in control over their learning and value achievement, positive emotions are triggered, and negative emotions are lessened (Pekrun, 2006). Overall, the associations between teachers' ICT competence, students' perceived control and intrinsic value, and FL enjoyment, anxiety, and boredom provided support for CVT's assumption regarding the partial mediation role of control and value appraisals in the relations between learning environment and achievement emotions (Pekrun & Perry, 2014). Importantly, extending previous findings which were often reported from students' monospecific view in EFL contexts, the aforementioned relations were revealed by both teachers and students who worked together to overcome the challenges of online education instigated by the Covid-19 pandemic in a relatively under-explored context of learning Chinese as foreign language.

In answer to our second research question, the findings demonstrated that the students perceived their online learning environment as well-structured and their positive perceptions of the teaching structure were associated more with increased control beliefs and intrinsic value. Our results further showed that heightened control beliefs and intrinsic value tend to translate into the more positive emotions such as enjoyment but temper negative emotions like anxiety and boredom. These findings align well with CVT's propositions that teaching quality is closely linked to students'

control and value appraisals, which in turn, influence their achievement emotions (Goetz et al., 2019; Pekrun, 2006). The results also echo past research conducted in online EFL learning environments, such as Yang et al.'s (2021) study on Chinese university students learning EFL online. However, they extend previous research by showing that students also experienced emotions such as anxiety, enjoyment, and boredom during online language classes, and that teaching factors and individual appraisals played a significant role in shaping these emotions through potential mediation mechanisms. These findings suggest that online language learners' emotional experiences are influenced by a range of factors, and that teachers play a crucial role in creating a positive and supportive online learning environment for their students. The findings are also in line with more general literature demonstrating that while a well-designed online learning environment is related to students' positive emotions, poor instructional design is related to their negative emotions (Jung et al., 2012; Xu et al., 2020).

Notwithstanding these findings, it is noteworthy that the international students in the present study seemed to give overly positive evaluations of their teachers' technological and pedagogical competence and they rarely mentioned any teaching inadequacies in the process of their online language learning. Such a result is contrary to the many teaching issues which have been reported by students studying in different online language learning contexts (Hu & Xie, 2020; Jung et al., 2012). One possible explanation might be that Chinese 'Confucious Educational Philosophies' emphasize respecting teachers and their teaching doctrines (Spring, 2008). The current international students' perceptions and emotions toward their Chinese teachers' online language teaching practice may have been influenced by this cultural and language ideology. Participants may have been reluctant to talk about their teachers' weaknesses during the interviews, leading to compromised results. In addition, the study found no association between teachers' ICT competence or provision of structure and the appraisals of utility value. In other words, students' beliefs about the importance of online language learning seemed to be independent of the specific teaching characteristics examined in the study. However, this result contrasts with studies conducted in Western countries, which have shown significant correlations between teaching factors and utility value (e.g., Goetz et al., 2019). One reasonable explanation might be that since Chinese language learning is a required subject for international students participating in this research to acquire their degree, they must attach great importance to learning the Chinese language for their academic success and future career prospects. As such, the participants may have a relatively fixed perception of the utility value for studying Chinese as a foreign language, irrespective of how they perceive whether teachers can use technology effectively to

teach or design a well-structured online course. These findings again highlight the need to consider the cultural context when applying the CVT framework to study the mediating role of specific appraisals between the learning environment and achievement emotions.

Limitations and Directions for Future Research

There are certain limitations to consider when interpreting the results of this study and deriving directions for future research. First, the sample size in the current study was relatively moderate due to the convenience sampling approach. Future research should recruit a larger number of participants to increase the generalizability of the present findings. Moreover, future research may also collect data from a broader spectrum of online language learners (e.g., learners from different age groups, ethnicities, or socio-economic backgrounds) to provide a more comprehensive perspective on the link between teaching characteristics, student appraisals, and emotions in different online FL contexts (e.g., required courses vs. selective courses).

Second, our study primarily focused on three achievement emotions: enjoyment, anxiety, and boredom. However, online foreign language classes involve a wide range of other emotions, such as pride and hope (Fraschini & Tao, 2021; Yu et al., 2022). Further research is needed to explore how online teaching characteristics relate to these emotions and the role of students' appraisals of control and value in this context. On a related note, while enjoyment, anxiety, and boredom are essential learning outcomes in their own right (Buil et al., 2016), it is also crucial to explore the extent to which these emotions translate into other educational outcomes, such as student engagement or academic achievement.

Third, our research design was qualitative, and we interviewed participants only once, with data collected when they had been studying the Chinese language for 6–8 months. Students' perceptions may evolve over their language learning journey. Therefore, it would be insightful to adopt a longitudinal approach to capture the dynamic nature of the variables examined in this research, including students' perceptions of their learning environment, appraisals of control and value, and achievement emotions.

Implications and Conclusion

Notwithstanding the limitations, the present study has several implications for educational practice. First, it suggests that initial teacher education and continuous professional development programs should equip educators and teacher trainers with the necessary skills to adapt to various teaching

formats, including online teaching. As observed during sudden transitions to remote learning, teachers may struggle to integrate technological knowledge with pedagogical content and teaching methods. Long-term training in ICT competence can facilitate their ability to integrate technology into their teaching practices and adapt to new teaching and learning environments more effectively. These measures can not only enhance the quality of online language teaching but also improve students' perceptions of their learning environment.

In addition, teachers should be able to provide a well-designed online teaching environment. They need to know how to monitor students' progress and provide immediate feedback in online learning environments to enhance their pedagogical design for online language teaching. They should ensure that the pace of online instruction, task complexity, and difficulty align with students' prior knowledge and readiness for online L2 learning. These approaches can, in turn, have a positive impact on their control and value appraisals, as well as their achievement emotions. Specifically, they can mitigate negative emotions such as anxiety and boredom while increasing the likelihood of positive emotions like enjoyment.

In conclusion, the present qualitative study explored the relations between teachers' ICT competence and provision of teaching structure and students' appraisals and achievement emotions in an online language learning course during the Covid-19 pandemic. Triangulated data from student and teacher interviews revealed that these teaching characteristics were perceived as the important determinants of students' emotional experiences. In addition, appraisals of control and intrinsic value were found to play a mediating role in the relationship between teaching characteristics and students' emotions while utility value seemed less influential in this process. These findings highlight the role of teacher-related aspects and cognitive appraisals in shaping emotional experiences in online foreign language learning. We argue that when the aforementioned necessary steps are taken, an optimal online learning environment can be established. Such an environment would prioritize students' emotional well-being, foster a dynamic and interactive learning experience, and improve positive learning outcomes within online learning environments.

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