Teaching and learning languages online: Challenges and responses

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A B S T R A C T

The outbreak of COVID-19 generated an unprecedented global push towards remote online language teaching and learning. In most contexts, language teachers and learners underwent a rapid switch to online instruction with limited resources and preparation. Their experiences demonstrate resilience, perseverance, and creativity under highly challenging conditions. This collection of studies examines the challenges that language teachers and learners have experienced in teaching and learning online, explores how they have addressed these challenges, and identifies critical lessons to help language educators better respond to emergencies like the COVID-19 pandemic. In this introductory article, we discuss the background of this special collection on teaching and learning languages online, provide a review of the growing body of research on online language education in the field, and introduce the studies published in the collection.

1. Introduction

The COVID-19 pandemic has profoundly changed our lives and professional practice. In a time when educational institutions across the world were forced to close, language teachers and learners were compelled to teach and learn languages online on a global scale. Although technology has been increasingly integrated into language education in recent years and has seen widespread application in well-resourced contexts, thousands of language teachers and learners were suddenly forced to use the internet as their only medium for teaching and learning – for the first time and without adequate preparation (Hodges, Moore, Lockee, Trust, & Bond, 2020). Not only were many ill-prepared for the challenge of teaching and learning languages online, they were also, in many cases, poorly supported by their local infrastructure (e.g., internet availability) and resources. Furthermore, there is concern that this sudden, widespread, and large-scale increase in the use of online learning may have exacerbated the impact of inequitable access to infrastructure and resources.

Albert Einstein once said, "In the middle of difficulty lies opportunity" (Riker & Fraser, 2018, p. 1881). The COVID-19 crisis, despite its associated hardships, did generate ample opportunities for language educators to experiment with online learning technologies and gain valuable experience for their future integration in language education. It is, therefore, important for researchers to document the valuable lessons of this historically unprecedented drive to use technology in language teaching. This special issue of the System Journal exists to capture and share these lessons through submissions examining critical issues related to the learning and teaching of languages online.

The aim of this special collection is to document the challenges that language teachers and learners have faced in teaching and learning online, explore how they have addressed these challenges, and identify possible solutions that could enable language teachers

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and learners to overcome current and future challenges in a range of educational, national, and sociocultural contexts. COVID-19 is a truly global phenomenon which has forced the teaching and learning of languages to move online, meaning that many language teachers and learners have had to rely on technology with limited resources. This special collection is thus particularly interested in studies that engage with pedagogical issues that are relevant to readers in diverse contexts, including under-resourced ones and those that have been severely affected by the pandemic.

2. Research on online language teaching and learning

The COVID-19 crisis has prompted a plethora of research on online language education. A systematic review of the lessons of this crisis in relation to online language education is needed, but we here limit our efforts to giving readers a glimpse of this growing body of research, referencing Martin et al.'s (2020) framework, which categorizes relevant studies according to whether they focus on learners, educators, or educational institutions. Consequently, in the following sections, we discuss a selection of studies on language learners and learning, language teachers and teaching, and institutional efforts in facilitating online language education. When we highlight studies on institutional efforts, we also discuss relevant studies on the development of technology for language learning and teaching, as technological resources are often part of institutional efforts to support online education.

2.1. Learners learning languages online

This group of studies focuses on language learners' online learning experiences through the lens of their emotions, perceptions, practices, and readiness for online learning. It is noteworthy that language learners' emotions have emerged as a popular topic within research on the sudden switch from face-to-face to remote learning.

Research on the emotional experiences of learners learning languages in the emergency remote learning context has found a variety of emotions associated with online learning, of which boredom seems to be the most examined in both cross-sectional and longitudinal studies. Studies analyse sources of boredom and language learners' coping strategies (Pawlak, Derakhshan, Mehdizadeh, & Kruk, in press) or track the causal mechanisms of boredom and its impact on language learners over time (Yazdanmehr, Shirvan, & Saghafi, 2021). Pawlak et al., 's (in press) survey of Iranian university students and teachers reveals that both groups consider online classes more boring than offline classes, and that students found content-based courses more boredom-inducing than skills-based courses. Students report having limited strategies to cope with boredom in online learning, with some simply resorting to debilitative strategies such as skipping classes. Yazdanmehr et al.'s (2021) study uses a process-tracing approach to analyse a semester-long account of one L3 learner's experiences. The analysis reveals changing levels of boredom across the semester, with the peak occurring in the initial stage. The researchers further note that the L3 learner's boredom may be primarily explained by under-stimulation, low perceived control over tasks, insufficient attention, and user-unfriendly technology. This study helps us understand what makes online language learning boring, and thus invites us to explore how language learners can overcome boredom.

Despite their potential to induce boredom, online classes were also shown to benefit learners' emotional states by reducing the negative emotions common in offline classrooms, such as foreign language classroom anxiety (FLCA). A survey of 510 European language learners indicates that they experienced more language learning enjoyment and lower anxiety in online classes (Resnik & Dewaele, in press). Moreover, those who enjoy language classes, regardless of the learning modality, are more likely to be learners with higher levels of learner autonomy and emotional intelligence. Adding pride to the frequently examined emotions of enjoyment and anxiety, Fraschini and Tao's (in press) survey among Korean beginning learners indicates higher levels of enjoyment and pride than anxiety in online classes. They further reveal that those who enjoy or take pride in language class are more likely to achieve better academic outcomes. These emotions may be related to learner and teacher variables, such as teacher friendliness and learners' previous L2 learning experience.

Other studies of online language learning experiences have focused on their perceptions and practices, especially in the context of online pedagogical innovations such as task-based design or authentic language learning. Although learners perceive online language classes as less effective, Lee (2021) concludes that purposefully designing online courses can enhance learner satisfaction, and that students particularly appreciate prompt feedback from instructors, peer interaction, and effective task design. Meanwhile, Lian, Chai, Zheng, and Liang (2021) observe that the experience of authentic language learning opportunities in online classes has a positive impact on students' self-efficacy, particularly through collaborative task design. In another study, students doing a group presentation and project were found to have created and sustained a virtual communicative space in which they could articulate and negotiate meanings (Junn, in press). In other words, online spaces can enable language learners to demonstrate their L2 communicative competence. Chen (2021) indicates that the use of embedded scaffolding materials is effective in enhancing L2 learner autonomy to develop language skills, but less effective in promoting the learning of culture, for which learners prefer teachers' presence and assistance. In each of these studies, learner satisfaction was an important benchmark to measure the effectiveness of online instruction.

According to our knowledge, only one study has reported on language learners' readiness for online learning and its correlation with motivation, engagement, learner attitude, and support (Jiang, Meng, & Zhou, in press). The authors reveal that language learners show high levels of readiness for online learning, and the predictive power of learner readiness for motivation and engagement highlights the importance for language teachers to promote positive learning attitudes and provide appropriate environmental support to language learners for online learning.

2.2. Teachers teaching languages online

While the above-mentioned studies document efforts to understand and enhance students' online learning experiences, we should be aware that improvements in students' online learning experiences comes at a price for language teachers. For example, Lee (2021) discusses the experience of an instructor with significant experience in technology-mediated teaching who spent three extra hours per day in online teaching to improve student satisfaction. For the majority of language teachers, who have limited knowledge of educational technology, the work necessary to achieve the same improvement for learners would be even greater. That may explain why a large number of studies on language teachers focus on their first-time online teaching experiences, their wellbeing (including emotions, identity, agency, and retention), and their pedagogical efforts to enhance teaching effectiveness.

Given that teaching fully online is new to the majority of language teachers, research has investigated language teachers' use of technology as a crucial component of their first-time online teaching experiences. Studies in this area often start with general questions regarding language teachers' perceptions of the advantages and disadvantages of online teaching (Tarrayo, Paz, & Gepila, in press). The most frequently highlighted disadvantages include limited student engagement, uncertainty about students' understanding of the learning content, technical problems, and a lack of technological skills. Cheung's (in press) case study of a secondary ESL teacher in Hong Kong reveals that language teachers' use of technology is mediated not only by their technological competence but also by their pedagogical beliefs (i.e., form-focused and exam-oriented). Xu, Jin, Deifell, and Angus's (2022) large-scale survey of Chinese as foreign language (CFL) teachers in the United States explores the important role of self-confidence and the perceived value of online teaching in language teachers' use of technology. While teachers take primary responsibility for adapting to online instruction, external support is crucial and thus studies such as these argue for the need to provide hands-on and language-specific professional support through language teachers' professional communities.

Relevant research has also documented language teachers' first attempts at online teaching in synchronous and asynchronous settings. Moorhouse and Beaumont (2020) elaborate on how one elementary teacher prepared and delivered real-time live lessons in a metropolitan school; their study presents encouraging findings and demonstrates that successful teaching of synchronous classes is possible with sufficient preparation. Yi and Jang's (2020) study, meanwhile, explores two elementary teachers' video-based asynchronous teaching in a small rural school. Their findings suggest that remote teaching generates opportunities for translingual practices and pedagogy, as well as for collaborative teaching.

Research has noted that online teaching has a significant impact on language teachers' emotional experience, identity change, and pedagogical competence. For example, when language teachers do not find their imagined identity (e.g., an entertaining, interesting, and uplifting teacher) to be feasible in the virtual space, they necessarily take on a pragmatic identity, shifting attention to examinations and course quality (Yuan & Liu, in press). In a similar vein, Gao & Cui, (in press) argue that teachers' pedagogical beliefs about teacher roles (i.e. a coach, a guide, or a caring example) have a long-lasting impact on their agentive adoption of online teaching activities, which is sustained in offline class when they resume. While language teachers feel obliged to facilitate student engagement and channel positive emotions through building teacher-student connections, the newly built connections may oblige language teachers to take on unwanted emotional labour and prompt them to seek collegial support in the negotiation of emotional rules (Liu, Yuan, & Wang, in press). Even with this support, class interaction emerges as a highly demanding task that requires language teachers to enhance their pedagogical competence in multiple aspects, including technological competencies, online environment management competencies, and online teacher interactional competencies (Moorhouse, Li, & Walsh, 2021).

Given the fact that online teaching creates an additional workload for language teachers, a few studies have examined language teacher retention, exploring why language teachers have left or stayed in the profession after experiencing the emergence of online teaching during the pandemic. For example, Moser & Wei, (in press) profile three types of teachers – stayers, leavers, and conditional stayers – characterizing each group in terms of their differing levels of human, social, structural, and psychological capital. Language teachers "felt untrained, marginalized, and emotionally overworked" (p. 26) in their online teaching during the pandemic; thus, it is necessary to include online teaching pedagogy in language teacher education and build professional networks to support language teachers' ongoing professional development. Another study (Gregersen, Mercer, & MacIntyre, 2021) identifies teachers' perceptions of the factors that have made online teaching more or less stressful during the crisis, including health, freedom, work/life balance, job security, and uncertainty about the future. The findings suggest that language teachers should not only address student wellbeing, especially their socio-emotional needs, but should also attend to their own wellbeing strategically to remain resilient for online teaching. It is noteworthy that these studies move beyond the scope of online teaching and take a whole-person view of language teachers.

Another major line of research has focused on the design and implementation of pedagogical activities to facilitate peer interaction and/or teacher-student communication in online teaching. These studies discuss the value of telecollaboration among students through the building of virtual literature circles (Ferdiansyah, Ridho, Sembilan, Sembilan, & Zahro, 2020) and the creation of intercultural projects (Porto, Golubeva, & Byram, in press). The notion of telecollaboration-oriented pedagogy has also been integrated into pre-service language teacher education for pedagogical task design (Ekin, Balaman & Bademkorkmaz, in press). Telecollaboration also manifests in language teachers' design of materials to promote flexible learning, contributing to a more inclusive classroom for learners with differing technology access (Tarrayo & Anudin, in press) or with differing English proficiency levels (Glas, Catalán, Donner, & Donoso, in press). Transnational language teachers work to extend teacher-student interaction beyond the class by using additional communication channels or strategies such as informational communication via WeChat and additional forum activities (Busteed, in press). The above-mentioned studies also discuss issues such as differentiated instruction, either in language program design (Sun, in press) or in language teacher education (Glas et al., in press).

Finally, we also acknowledge research-informed efforts to provide a theoretical rationale for online class design. These efforts

mainly draw on findings from second language acquisition research to guide the design of online teaching activities, through practices such as implementing models of language task engagement (Egbert, 2020), crafting different digital spaces for the technology-mediated remote learning of pragmatics (Taguchi, 2020), establishing virtual language communities (Lomicka, 2020), designing collaborative technology-mediated tasks (González-Lloret, 2020), and sequencing language production activities (Payne, 2020). These studies generate important insights for language educators to make informed pedagogical decisions in designing and refining online instruction, leading to enhanced teaching and better student learning.

2.3. Institutional and administrative issues (including software)

A third group of studies examine institutional efforts to support online learning and teaching. It must be noted that high-quality online instruction is only possible with continuous support from the community, universities and schools, and technology specialists.

At the level of the community, Sayer and Braun (2020) investigate the impact of the broader social context on English learners' remote learning, as English learners in K-12 schools in the United States faced greater challenges in the sudden transition to online education than their native-English-speaking peers in the US. While language educators worked hard to reach out to the families to maximize students' readiness for online learning, the study reveals that building teacher-parent connections helps both parties gain greater insights into student learning which is critical for supporting language learners. However, teacher-parent connections may require investing additional resources, such as involving family liaison professionals and community partners when working with minority language-speaking families.

Studies of frontline practitioners have highlighted the practices adopted by language programmes at Michigan State University (Gacs, Goertler, & Spasova, 2020) and Harvard University (Ross & DiSalvo, 2020). Acknowledging the distinction between planned and crisis-prompted online language teaching, Gacs et al. (2020) provide a roadmap for language educators to prepare, design, implement, and evaluate online education. Since each of these four steps may take several years under planned online learning conditions, educational managers and policymakers should consider and act to mitigate the challenges that the emergency switch to online teaching has created, such as providing release time and professional development for instructors, organizing joint curricular planning, and adapting teacher evaluation criteria. Ross and DiSalvo (2020) highlight that language educators cannot do all the labour required for a successful transition to online teaching, and that institutions should mobilize all the resources at their disposal to support teachers and students. For example, to ensure high-quality online learning programs, the Language Center at Harvard University provided web-based resources for faculty and students, sought support from undergraduate and graduate student helpers, and offered students more opportunities to have one-to-one language exchanges with native speakers.

Institutions must also work to design and implement relevant professional development activities for language teachers. Paesani (2020) recounts the development of a research-informed professional development program for online teaching at the University of Minnesota. The program not only assists language teachers in teaching online effectively but also cultivates adaptive expertise among language teachers, which is closely linked to teacher identity, agency, and critical reflection. Similar efforts have also been made to establish professional networks online for world language educators at the University of Oregon (Knight, 2020), in which online community leaders played a crucial role in supporting meaningful communities. These studies foreground collaboration as a key feature of language teachers' professional development in online instruction.

Alongside this institutional investment of effort and resources, technology specialists have worked arduously to develop or update technical tools for online teaching during the pandemic. Bonner, Garvey, Miner, Godin, & Reinders, (in press) reported on the piloting of Classmoto, a new online application to collect real-time analytics of learners' social, affective, and cognitive engagement. While teachers and students had generally positive experiences using the software, they also had mixed views of its functions and applications. For example, many participants felt that the online tool placed an extra burden on language teachers and learners. Kohnke (in press) discusses the development and implementation of a chatbot which can be trained to accommodate individual language learners' needs and enable language teachers to provide differentiated instruction. The results of the experimental use of this software indicate that it can also support and motivate learners' out-of-class language learning to supplement in-class input. Kohnke and Moorhouse's (in press) comprehensive review of the features of widely-used videoconferencing application Zoom argues that it enables language teachers to achieve interactive synchronous classes. Studies such as these, whether they introduce new technology or review existing software, generate important findings to help language teachers use technology effectively to improve the quality of online language classes.

3. The special collection

As mentioned earlier, we invited contributors to address issues related to the learning and teaching of languages online globally, including (but not limited to):

1. Enhancing and sustaining language learners' online learning
2. Motivating language learners for effective learning
3. Designing effective and engaging online learning activities
4. Developing online communities for language learners and teachers
5. Assessing language learners' progress
6. Preparing language teachers for teaching online
7. Language teachers' experiences of teaching online

The responses we received from our colleagues were overwhelming. While articles published in this special collection largely address the topics we initially planned to include, they also echo the broader themes discussed in our above review of the emergency switch to online teaching as a result of the COVID-19 pandemic. We continue to use Martin et al.'s (2020) classification in introducing the special collection of articles.

1) Language teachers and emergency-prompted online teaching (12 articles)

Twelve of the 26 articles in this collection address how language teachers responded to the emergency switch to remote teaching. The specific topics explored include teachers' changing perceptions and practices, digital and pedagogical competencies, and intentions to use digital tools. Three articles also use teacher agency or emotion as a lens to understand language teachers' first experiences of online teaching.

Two articles explore the impact of the shifting of contexts on language teachers. MacIntyre, Gregersen, and Sercer (2020) surveyed 600 language teachers concerning their stress and coping strategies. The respondents reported high levels of stress and a range of approaches to dealing with stress, which the authors divide into approach coping and avoidance coping. The survey results suggest that language teachers' approach coping was correlated with positive psychological outcomes (e.g., wellbeing), while their avoidance coping was only correlated with negative psychological outcomes (e.g., further increases in stress). The fact that avoidance coping may have resulted in more stress highlights the necessity of educating language teachers about how to employ healthier coping strategies. Moser, Wei, and Brenner (2021) conducted a national survey in US to investigate world language teachers' changing perceptions and practices as related to classroom settings (pre-K12 vs. postsecondary) and prior online teaching experience. The survey data indicated that teachers' perceptions of course design or adjustment were not affected by having prior experiences of online teaching, regardless of the classroom settings. Compared with postsecondary teachers, pre-K12 teachers were less confident and felt that they had less control over course design and learning outcomes, and thus needed more support and training in digital instruction.

Two articles take a technology acceptance perspective to analyse language teachers' online teaching intentions. Xu, Jin, Deifell, and Angus (2021) surveyed Chinese language instructors working in postsecondary institutions about their perceived values and self-confidence in online teaching of Chinese characters. The participating instructors showed ambiguous attitudes towards online teaching, and their self-confidence in using online tools was affected by their prior experiences of using technology. The researchers further confirmed that language instructors' intention to use online tools was determined by their perceptions of the tools' value and of students' readiness. Building on the technology acceptance model, Huang, Teo, and Guo (2021) validate new dimensions (i.e., facilitating conditions, technology complexity, and perceived anxiety) to explain teachers' online teaching intention. A survey of 158 English as a foreign language (EFL) teachers indicated that their behavioural intentions were significantly correlated to their attitudes and perceived usefulness of digital tools in teaching. Their perceptions of the usefulness of online tools may be associated with the tools' ease of use and the teachers' attitudes towards technology. Facilitating conditions may in turn account for variations in perceived ease of use. The authors call for educational administrators to provide more support for teachers to cope with the transition.

Other researchers have directed their attention to language teachers' digital or pedagogical competence in the online teaching context. For example, Wong and Moorhouse (2021) draw on the European Framework for the Digital Competence of Educators (DCE) and examine how primary and secondary language teachers demonstrate digital competence through digital resources, teaching and learning, assessment, and empowering learners. The findings indicate that teachers effectively leveraged synchronous and asynchronous platforms to address students' educational and linguistic needs and fostered digital relationships with students, but lacked digital competence in the use of assessment. This study demonstrated the DCE framework's value as a potential tool to enable researchers to have a deeper understanding of teachers' digital competence. Le et al. (2022) focuses on how Vietnamese EFL teachers adjusted their online pedagogical practices to facilitate multiple forms of interaction. They were found to organize teaching activities for teacher-student interaction and student-content interaction but not for student-student interaction. These teachers had faced a series of challenges in facilitating online interaction, including the lack of online teaching training, an unsupportive school policy, and the poor quality internet connections. The study suggests that many language teachers need training on remote teaching and clear guidelines for online instruction.

Since the relevant scholarship has attached greater importance to the development of online pedagogy, the special collection also includes two articles on pre-service language teachers' perceptions and practices in the process of learning to teach digitally. Taghizadeh and Amirkhani (2022) developed two instruments to explore pre-service EFL teachers' online class management, including their classroom management skills and approaches to managing challenging online situations. The results reveal that the most popular strategies for online classroom management include time management, course organization, positive reinforcement, and building a positive atmosphere. In response to the challenges of online classes, teachers emphasized the use of collaborative tasks and learner-centred strategies in facilitating student engagement, as well as the creation of online learning communities to boost students' sense of belonging. Using co-constructed autoethnographic narratives, another article presents a detailed portrait of five student teachers teaching world languages during the sudden transition to remote teaching (Back et al., 2021). The student teachers reported an overall feeling of disconnection from classroom practices and district communication, as well as lowered expectations of student learning, particularly in the subject of world languages. The transition to online learning also reduced the role student teachers played in classes, limiting their opportunities to learn. Based on these accounts, the authors present implications for student teaching in the digital age.

Online language teaching is challenging for both pre-service teachers and experienced teachers. Yan and Wang (2022), following three experienced EFL teachers, conceptualize remote teaching as a boundary-crossing practice to understand teachers' learning mechanisms and the factors affecting their transition to teaching online. They divide the transition process into three stages, namely

preparing, adapting, and stabilizing, in which four learning mechanisms (i.e., identification, coordination, reflection, and trans-formation) occur with varying levels of prominence. These teachers also found that their emergency online teaching was influenced by the synergetic effects of dispositional traits and external support, which helped them overcome various challenges in the boundary-crossing process.

Two articles adopt teacher agency as a theoretical lens to explore language teachers' online teaching practices within the contextual affordances and constraints of the virtual space. Chen (2022) treats L2 online teaching as an ecology and explores the relationship between teacher agency and digital affordances. Based on a semester-long study of two Chinese language teachers, the study reveals that teacher agency was enacted using digital tools in relation to teacher beliefs (i.e., the learner-centred approach) and social contexts (i.e., the pandemic). Their study demonstrates the value of taking an ecological view to reflect the link between classroom dynamics and the social context. Tracking four language teachers for six months, Ashton (2022) examines teacher agency in relation to digital affordance as well as constraints. The findings reconfirm teachers' exercise of agency in line with their professional identities, in which social structural factors play a significant role. Ashton also clarifies the practical-evaluative dimension of teacher agency, highlighting the need to educate future teachers about teaching in diverse conditions.

The last article in this category focuses on teacher emotion in online settings. Song (2022), using autoethnography, explores the author's own emotional experience in the emergency move to remote teaching. Drawing on the notion of vulnerability, this study reveals experiences of increased marginalization in the online context, which accentuated this teacher's non-native speaker identity and deepened her emotional struggle. This self-reflection also serves as the foundation for professional growth, in that the author developed sensitivity to students' emotions and made pedagogical choices to enhance their emotional experience and class partici-pation. The study emphasizes the importance of emotional reflexivity in facilitating personal growth and professional transformation.

2) Language learners learning online (13 articles)

The special collection includes 13 articles on language learners learning online. The most commonly addressed topic within this group is L2 learner emotion and student interaction. Researchers also explored the impact of online learning tasks on L2 development and student satisfaction.

Four articles examine language learner emotions in online classes. Two of these focus on learner emotion to measure the effec-tiveness of specific language learning activities. Zhang, Liu, and Lee (2021) explore language learners' enjoyment and emotion regulation during self-organized collaborative tasks conducted via a social media app. While language learners' level of enjoyment fluctuated at the individual and group levels, they generally experienced an enjoyable atmosphere. They adopted multiple types of regulation (including self-, co-, and socially shared regulation) to achieve group-level enjoyment; that is, they mostly engaged in shared regulation processes, and also realized emotional regulation through the combined use of emojis and words. This study supports the integration of collaborative activities in online instruction. Payant and Zuniga (2022) explore language learners' experience of flow in an individual peer revision task followed by a shared feedback session in a Zoom-based French writing course. The study reveals that the two types of peer revision activity were both flow-generating, but learners experienced a significantly higher level of flow in the exchange of feedback or when having greater familiarity with the task and technology. These findings shed light on peer review design in an online environment.

Another two studies focus on the L2 learners' emotional trajectories and also the potential factors behind emotions like boredom or stress in online learning. Derakhshan et al.'s (2021) survey of 208 undergraduate English majors focused on experiences of boredom in online classes, including antecedents of and solutions to boredom. The learners reported experiencing boredom throughout the se-mester, and the level of boredom reached a peak toward the end of the course. The survey data also reveals that boredom was mainly caused by excessive teacher talk, limited student involvement, technical problems, and repetitive or overloaded tasks. These findings may inform teachers and teacher educators on how to reduce boredom so as to improve learners' online learning experience. Similarly tracking learner experiences longitudinally, Ruiz-Alonso-Bartol, Querrien, Dykstra, Fernández-Mira, and Sánchez-Gutiérrez (2022) focused on stress levels among Spanish learners in online classes. They found that learners' stress decreased from the beginning to the end of the semester, although there was variation between individuals. The learners' high levels of stress may be attributed to reduced peer-to-peer connection, a lack of familiarity with online learning, and the belief that online settings produce less learning than face-to-face settings. In contrast, the teachers believed that online classes enable more student talk as well as improved relationships between teachers and students.

Ji, Park, and Shin (2022) investigate L2 learners' satisfaction in a synchronous online learning environment, which was found to be associated with different factors at the beginning and end of the semester. Based on two waves of data collection, the study reveals that greater satisfaction among language learners was predicted by higher readiness early on, but more associated with learner engagement at the end of the academic term. Moreover, the L2 learners reported using multiple learning strategies, including notetaking, recording, and searching for additional materials, which contributed to their engagement as well as its predictive relationship with satisfaction.

Three articles tested the effectiveness of specific online learning tasks on learners' acquisition of the target language. Loewen, Buttiler, Kessler, and Trego (2022) measured the impact of synchronous video computer-mediated communication (SVCMC) activities, in which L2 Spanish students were required to transcribe and reflect upon their own conversations. Using a cognitive-interactionist approach, the study found that the task prompted the L2 learners to focus on form, particularly through either self-correction or recasting, and to target vocabulary the most. The activity also provided chances for L2 learners to communicate in the target language, which helped them to develop fluency. He and Loewen (2022) explored how goal-setting with feedback improved language learners' engagement and motivation in the context of app-based vocabulary self-study. They identified that goal-setting-and-checking activities and the use of feedback tools motivated learners to be more engaged in vocabulary learning. Salomonsson (2020) examine the impact

of modified output on L2 acquisition in an online German language class. The analysis of peer-to-peer conversations reveals the prevalence of learners modifying their output. The learners' modified output mostly results from self-initiated self-repairs, rarely from other-initiated self-repairs, and never from self-initiated other-repairs. Moreover, the modified output mostly targets syntax or morphology rather than lexis. These studies generates critical insights on how online classes or activities can be designed to facilitate L2 learning.

Five articles address the issue of interaction, which is key to language learning, in the remote-learning context. Cheung's (2021) study of an online primary class examines the multi-modal exchanges between a veteran EFL teacher and his students. The 80 recordings of online sessions reveal many verbal and non-verbal responses from students in whole-class sessions, and show that non-verbal responses often stimulate follow-up verbal elaborations. When participating in small-group sessions, more able learners demonstrated remarkable interactional competence using prompting and repairs. The study provides evidence for multimodal exchange in the online environment, which may redefine classroom interactional competence. Similarly highlighting the phenomenon of multimodal interaction, Chen, Zhang, and Huang (2022) take a translanguaging perspective and explore the association between translanguaging and learner agency in a content and language integrated learning (CLIL) course. Their analysis of a social media chat log between teachers and students indicates that trans-semiotizing between linguistic and non-linguistic resources is associated with fluctuations in learner agency. In particular, learner agency becomes more achievable when learners trans-semiotize between texts and pictures to explore learning opportunities. Learner agency also becomes more visible through the practices of trans-semiotizing to emojis. Hence, the study argues that language teachers should enhance their trans-semiotic competence to understand students' trans-semiotic practices and to deploy multi-semiotic resources to interact with students.

The other two articles draw on the community of inquiry framework to understand student interaction through the concept of social presence. Carbajal-Carrera (2021) analyses five episodes of activism interactional practices to illustrate the application of hand signals, emotional attunement check-ins, pass-the-ball, digital collages, and spectrum lines in video-conferencing-based L2 learning. They found that these practices facilitate the teaching, social, and cognitive dimensions of presence. The study not only calls for a multidimensional approach to presence but also generates practical strategies to enhance presence in online settings. Alger and Eyckmans (2022) complement the concept of social presence (SP) with a qualitative interpersonal pragmatics approach to examine L2 learners' interpersonal interactions and relationships. Among all SP indicators, teacher acknowledgement was recorded as the most commonly used, followed by paralanguage, student acknowledgement, and self-disclosure. They all potentially boosted affective and cohesive effects. The study further reveals that students appreciate in-class opportunities to express their frustration and teacher-initiated off-task talk, which promote relationship building and feelings of belongingness.

The last article in this category addresses interaction from a combined perspective of teachers and students (Harsch, Müller-Karabil, & Buchminskaia, 2021). This study takes a mixed method approach, involving 35 teachers and 898 students from over 200 language courses in 14 languages. The data analysis reveals that creating learner-conducive interaction is a major problem in online language classes, which may be attributed to the unclear roles of teachers and students, an insufficient social presence, and improper communication channels. Based on this, the study argues that teachers and students should make a joint effort and create the interactional space cooperatively.

3) Institutions or others in online language education (1 article)

The special collection does not include research on institutional effort at the policy level, possibly due to the journal's mission to publish articles with significant pedagogical implications. Apart from the above research on language teachers and learners, one article directed its attention to the parents of young learners, who play an indispensable role in supporting language learning (Tao & Xu, 2022). Based on interviews with 30 parents of students in Grade 1–5 at a Chinese primary school, the study reported a range of supportive practices. Monitoring of learning was the most common among these, followed by affective, academic, and technology support. The use of these types of supportive practices was mostly mediated by the students' grade level and parents' socioeconomic status. It is also worth noting that parents played a bridging role in facilitating teacher-student communication, particularly beyond the class, to solve academic problems and boost learning motivation. Thus, the study proposes a tripartite model of parental support involving interaction between parents, young learners, and teachers to support young learners' L2 learning online.

4. Concluding remarks

The outbreak of COVID-19 has made online teaching and learning a global phenomenon in the history of language education. This collection of articles documents local efforts in a range of settings at various educational levels, in both underdeveloped and developed regions, where synchronous or asynchronous online instruction was adopted as a response to the pandemic. The wide range of educational, socioeconomic, and digital settings represented in these articles reflects the variety of challenges confronting language teachers and learners and the responses they have developed to overcome them. While technical issues have been prevalent, these studies highlight the significant cognitive and affective aspects of human experience of learning and teaching languages online. The evidence from this collection of studies confirms the importance of building online communities among language learners, between teachers and students, and even with parents, to combine multiple stakeholders' efforts to overcome challenges. Given that online teaching may remain part of the teaching landscape in the post-pandemic era, the research efforts documented in this special collection have important implications for language teachers, language teacher educators, and educational administrators to maximize digital affordances and enhance learning and teaching in future online education.

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