ONLINE TEACHING DURING COVID-19: EXPLORING THE RELATIONSHIP OF CALL TRAINING AND BELIEFS ABOUT PRONUNCIATION TEACHING

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Although studies have explored teaching practices when teachers were thrust online during COVID-19, more work is needed to understand how COVID responses affected teachers' beliefs. This study, part of a larger investigation, explored teacher beliefs about teaching various language skills, including pronunciation, as they transitioned online. Participants (n=109) representing a range of backgrounds completed an online survey. Using a three-way ANOVA, this study identified a surprising finding involving the impact of CALL training, experience teaching online prior to COVID-19, and experience teaching online during COVID-19 on a ranking task of comparative difficulty of teaching different skills online. Most skills (reading, writing, listening, speaking, grammar) were perceived to be easier to teach by those with CALL training as they gained experience teaching online. Pronunciation was distinct in that teachers with CALL training perceived pronunciation to be more difficult as they began teaching online, suggesting areas for improvement in both CALL and pronunciation training.

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INTRODUCTION

When COVID-19 swept the globe in 2020, schools were shut down to prevent the spread of the disease, and instructors were forced into online teaching with little notice (Herold, 2020; Pastor, 2020). The present study explores language-instructor beliefs about online teaching at the beginning of the pandemic, focusing, in particular, on differences in beliefs regarding the difficulty of teaching various language skills.

COVID-19, a strain of highly contagious coronavirus that can cause respiratory illness, showed "explosive growth" early in 2020, and was officially labeled a pandemic in March 2020 (Platto et al., 2020). In response, many schools shut down, or turned to online education, strategies proven useful for reducing transmission (Viner et al., 2020). UNESCO found that 132 countries moved to close schools during the pandemic, projecting that globally, 84.3% of enrolled students (over 1.5 billion learners) were affected by closures (UNESCO.org). Internationally, governments and schools provided access to education through several means, including educational television programming, tutoring programs, and mailed paper-based learning packets; however, the most ubiquitous approach was online education (WorldBank.org, 2020).

Online education, well-established in the last twenty years (Harasim, 2006; Ing & Gabor, 2020), has been shown to be an effective alternative to traditional classroom teaching (De Paepe, 2018). Although COVID-19 pushed many instructors online for the first time, there had been growing interest in teaching and learning languages online before the pandemic (Meskill & Anthony, 2015). Surveying language instructors, Murphy-Judy and Johnshoy (2017) found a range of languages already offered online. For example, they found frequently offered online courses for French, German, and Chinese, particularly at community colleges and public universities. Online instruction can afford students equal or greater language learning opportunities compared to in-person classes (Chenoweth & Murday, 2013).

Although many instructors view language learning technologies as valuable, some lack the time and confidence necessary to voluntarily transition online (Stickler & Emke, 2015). Not all instructors receive official training in Computer Assisted Language Learning (CALL); Beaven et al. (2010) found that only half of language instructors surveyed reported receiving CALL training while the other half were primarily self or peer-taught. Research suggests language learning lags behind other specialization areas in adopting technological tools (Germain-Rutherford & Ernest, 2015). Even teachers who strongly believe in the power and potential of technology for learning may struggle to enact successful online teaching (Shifflet & Weilbacher, 2015).

In general, when transitioning online, many teachers report facing challenges in re-envisioning and reworking their instruction to make it suitable for the new medium (Stickler & Hampel, 2015). While many teachers have integrated tools such as PowerPoint into their teaching, the use of internet resources, such as Kahoot and Padlet, is less widespread (Boonmoh et al., 2021). The process of moving instruction online often compels teachers to learn new technologies and skills (Stickler & Hampel, 2015). Less experienced teachers are more likely to rely on a narrow range of resources and the most familiar and comfortable technologies (Hlas et al., 2017).

One major worry regarding online language learning is how to ensure learners are provided with sufficient language practice and, specifically, speaking practice. Russel and Curtin (2013) found that large language classes were more challenging to manage online, given that instructors were unable to execute pedagogically sound approaches. Students also expressed greater displeasure with online courses for not allowing interaction (Russel & Curtin, 2013). In Dung's (2020) study, online students also complained about the limited time for speaking practice with both fellow students and instructors. The structure of the class (synchronous vs. asynchronous) may affect the language skills students can practice. Synchronous activities are paramount for bettering speaking skills although asynchronous activities afford working students the opportunity to participate according to their schedule (Perveen, 2016).

Although studies have already started exploring online teaching practices during the pandemic (Doghonadze et al., 2020; Gunawan et al., 2020; Moorhouse, 2020; Zhang et al., 2020), little work has focused on the experiences and beliefs of pronunciation teachers. This study explores how teachers perceived the teaching of various language skills, including pronunciation, as they worked to transition online during COVID-19.

Research Questions

This paper concentrates on differences in instructors' beliefs regarding teaching particular language skills as they relate to their own demographics. The study examines two research questions:

1. As language instructors approached teaching online during COVID-19, what were their beliefs about the difficulty of teaching particular language skills (reading, writing, speaking, listening, grammar, and pronunciation)?

2. What differences were there, if any, in teacher beliefs when comparing teachers on the variables of training in CALL, experience teaching online before COVID-19, and experience teaching online during COVID-19?

METHOD

The study was developed and conducted as part of a class project at a mid-size university in the United States. Data were collected from March to June 2020 through an online *Qualtrics* survey.

Participants

The online survey was sent to 280 language teachers around the world and shared in *Facebook* groups related to language teaching. While 142 people consented to participate, only 121 submitted survey responses. Most of these, n=109, answered the quantitative questions used in this analysis. Among the 109 participants, the majority were female (n=77). They had an average age of 38.61 years (SD=13.22) and represented a range of teaching experience. The majority of participants (70.37%) were living in the USA, but several countries (or regions) were represented including Brazil, Columbia, China, Germany, Indonesia, Japan, North Africa, Russia, Spain, and Turkey. The majority of instructors taught English (50.93%), but other languages of instruction included Arabic, French, German, Indonesian, Italian, Japanese, Latin, Portuguese, Russian, and Spanish. Additional details about participants is provided in Table 1.

Table 1
Participant Demographic Information

Demographic information	**Participant counts (*n*)**
Gender	Female = 77 Male =30 Other = 2
Teaching Experience	0-5 years = 38 6-10 years = 24 11-15 years = 12 16-20 years = 8 More than 20 years = 26
Education Obtained	Bachelor = 19 Master's = 65 PhD = 25
Previous Training in CALL	Yes = 55 No = 54
Experience Teaching Online Prior to COVID-19	Yes = 25 No = 84
Experience Teaching Online During COVID-19	Yes = 65 No= 44

Note. Groups for the 3-way ANOVA, described further in the analyses and results sections, were based on data from the final three rows, Previous Training in CALL (referred to as CALL Training), Experience Teaching Online Prior to COVID-19 (referred to as Prior Experience), and Experience Teaching Online During COVID-19 (referred to as During Experience).

As Table 1 shows, half of the participants reported receiving previous training in CALL (50.46%), but less than a quarter (22.94%) had taught online prior to COVID-19. Notably, a large number of participants had not yet taught online due to the pandemic (40.37%). Among

these, some participants reported their schools remained completely closed at the time of the survey or had adopted other temporary strategies for sending materials to students, such as sending mailed packets of work. Many of these participants were the earliest responders in March 2020 and expected to transition online in the future.

Survey

The survey, implemented through *Qualtrics,* included a consent form and 44 questions. There were five biographical information questions, eight questions about teaching context, 18 Likert scales regarding general beliefs regarding online teaching, one ranking item of difficulty for teaching various language skills online, and 12 open-ended questions about beliefs and experiences with online teaching, both generally and during COVID-19 specifically. A copy of the survey is available here.

Analyses

The analyses focused on only a small subset of the data collected from the larger study. First, we calculated means and standard deviations for the item ranking difficulty for teaching various language skills online. To address the second question, which focused on differences in CALL training, previous experience teaching online, and experience teaching online during COVID-19, a three-way ANOVA was used to compare groups. Partial eta squared effect sizes were calculated.

RESULTS AND DISCUSSION

Overall, the general findings of the larger study aligned with many previous studies. For example, using a seven-point Likert scale (ranging from 1- *Strongly Disagree* to 7-*Strongly Agree*), participants agreed that they saw benefits of online education for both teachers and learners (for teachers M=5.35, SD=1.34 and for students M=5.33, SD=1.28), which aligns with the findings of Hlas et al. (2017). When comparing responses to the Likert-scale items across groups, the biggest differences emerged between those with prior experience teaching online and those without. Over a third (38.89%) of the Likert-scale items showed statistically significant differences on the basis of prior experience using a 3-way ANOVA (e.g. on the item of "I can help learners obtain the same learning objectives online" those with experience teaching online agreed more strongly [p<.01, η^2= .09]). In general, though, previous CALL training, prior experience teaching online, and experience teaching online during COVID-19 usually had a positive cumulative effect. For example, those with formal CALL training, prior experience, and experience teaching online during COVID-19 firmly agreed that they could meet the same learning objectives online (M=6.00, SD=.93). On the other hand, the lowest agreement to that statement came from those with no formal CALL training, no previous experience teaching online, and also no online teaching experience during COVID-19 (M=3.88, SD=1.89). Groups with one or two of the facilitating experiences, or training, fell in the middle (means ranging from 4.06 to 5.77).

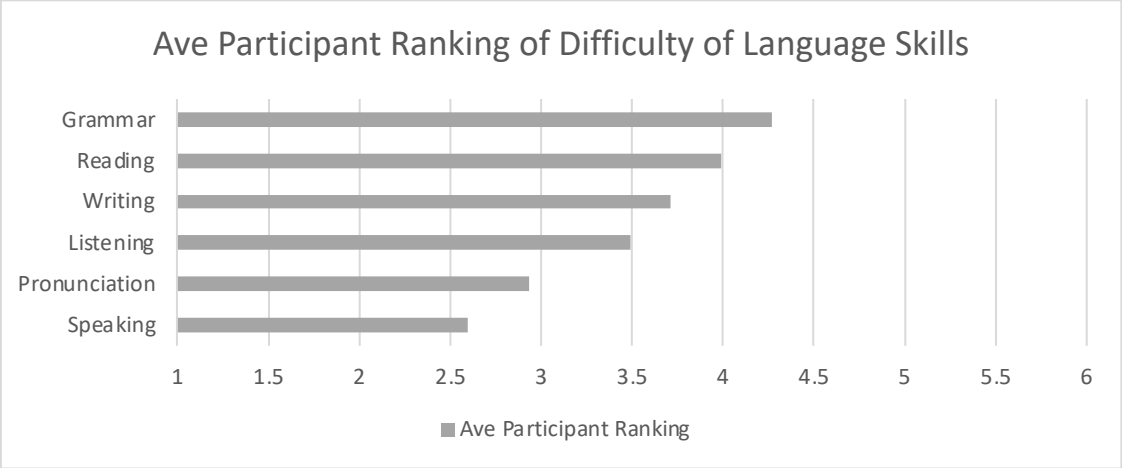
Language teacher beliefs regarding skill area difficulty

When examining the data, there was one area that did not fit the general pattern, namely, beliefs about the difficulty of teaching particular skill areas. As part of the survey, teachers were asked to rank the difficulty of teaching various language skills online. In the rankings, the first item was considered the hardest to teach, while the sixth was the easiest. As shown in Figure 1, participants thought grammar was the easiest to teach online (M=4.27, SD=1.62), followed by

reading (M=3.99, SD=1.54) and writing (M=3.71, SD=1.68). A similar variation was found for all items as SDs only ranged from 1.54 to 1.76. Speaking was considered the hardest skill to teach (M=2.60, SD=1.61), closely followed by pronunciation (M=2.93, SD=1.76).

Figure 1.

Average participant ranking of difficulty of language skill for online teaching



Effects of training and experience on beliefs regarding difficulty of skills

As noted previously, to explore differences across groups, participants were divided by responses to demographic questions relating to previous training in CALL (yes, *n*=55/no, *n*=54), experience teaching online before COVID-19 (yes, *n*=25/no, *n*=84), and experience teaching online during COVID-19 (yes, *n*=65, no, *n*=44) to run a three-way ANOVA. Four of the six language skills showed significant differences in difficulty rankings for at least one grouping or interaction across groups. Items with statistically significant primary effects or significant interactions are shown in Table 2, along with the *F* statistic, *p* values, and effect sizes calculated by partial eta squared.

Table 2

Statistically significant differences by survey item

Likert statement	**Grouping with statistically significant differences**	***F***	***p***	η^2
Skill ranking				
Speaking	Prior Experience	2.80	.02	.05
Grammar	Prior Experience	7.65	<.01	.07
Reading	CALL Training * During Experience	7.32	<.01	.07
Pronunciation	CALL Training * During Experience	10.69	<.01	.10

Prior experience affected the ranking of two skills, speaking and grammar. Those with prior experience ranked speaking as more difficult (*M*=1.92, *SD*=1.00 versus *M*=2.80, *SD*=1.71) while grammar was ranked as easier to teach online (*M*=5.00, *SD*=1.00 versus *M*=4.05, *SD*=1.71). These concerns align with students' complaints that it is difficult to get enough opportunities to speak in online classes (Dung, 2020) and supports the importance of synchronous activities for teaching speaking skills, as suggested by Perveen (2016).

When looking only at the impact of experience teaching online during COVID-19, none of the items showed a significant difference. Yet, the experience of teaching online during COVID-19 did have significant interaction with CALL training for the ranking of two skill areas, reading and pronunciation (see Table 3). For those with CALL training, the experience of actually teaching online during COVID-19 made the task of teaching reading seem relatively easier. The opposite was true, however, for pronunciation. Those with training and experience rated pronunciation as harder to teach than it was for those instructors whose only online experience was during COVID-19 or those who had CALL training.

Table 3

Average ranking of skill areas, reading and pronunciation, using groups based on CALL training and experience teaching online during COVID-19

CALL training	Experience during COVID	Reading		Pronunciation	
		(*M*)	(*SD*)	(*M*)	(*SD*)
Yes	Yes (*n*=32)	4.63	1.38	2.31	1.38
	No (*n*=22)	3.68	1.29	3.64	1.62
No	Yes (*n*=31)	3.48	1.79	3.55	1.86
	No (*n*=22)	4.09	1.34	2.27	1.75

Note. Only 107 participants completed the ranking section.

In general, previous CALL training and experience during COVID-19 made reading seem easier to teach online, while the opposite was true of pronunciation as training and experience made pronunciation seem more difficult. Notably, pronunciation was the only item where two generally facilitative or supportive conditions (training and experience) led to a negative change in beliefs. While worries about teaching speaking and pronunciation may be reasonable and realistic, the findings also highlight the important role of CALL training in preparing teachers for speaking and pronunciation instruction online.

CONCLUSION

Although studies have already started exploring online teaching practices during COVID-19, little work has examined teachers' beliefs about teaching pronunciation online. This study found that although training and experience generally led to more positive beliefs about online language teaching (e.g., efficacy of online learning, beliefs in the benefits of online education, faith in students' abilities to learn online) which aligns with previous findings of Han et al. (2017), previous CALL training and experience during COVID-19 made pronunciation seem harder to teach online. Notably, pronunciation was the only item where two generally facilitative or supportive conditions (training and experience) led to a negative change in beliefs. This finding highlights the need to carefully review the training and resources available for computer assisted pronunciation teaching.

Although CALL has long been an area of interest to researchers and L2 pronunciation has seen rapid growth of research in the past 20 years, studies on and resources for using technology for L2 pronunciation teaching are much more limited. Levis (2018) points out that while technology has been a "consistent" strand of L2 pronunciation research, it is also somewhat "invisible" (p. 173). Popular reference books for L2 pronunciation (e.g., Derwing and Munro 2015; Kang, Thomson, and Murphy 2018; Pennington and Rogerson-Revell 2019; Reed and Levis, 2015) dedicate only one or two chapters to technology. Similarly, numerous computer-

assisted language learning reference books, dedicate limited, if any, attention to pronunciation (Chapelle & Sauro 2017; Farr & Murray 2016; Stanley, 2013; Walker & White 2013). General CALL training and resources would be substantially improved by offering a clear focus on pronunciation as a language skill that can be supported with technology use. Further, additional research into how to best use technology for pronunciation will help teachers identify research-supported technologies to incorporate in their teaching.

Limitations and directions for future research

Although the survey was useful for exploring beliefs about online pronunciation teaching, space limitations prevented a thorough discussion of the general beliefs about language teaching identified in the broader study. Further, a major limitation emerged from the survey's limited teaching context questions. Although data were collected about location (country) and languages taught, there was insufficient attention to levels taught, including grade level and proficiency information. Further, although the survey was sent across the globe, respondents primarily represented the USA, which may differ from other countries in important ways, such as internet availability. Additionally, although this study did find some early evidence of the pandemic on beliefs about online language teaching, the study only collected data from March to June 2020, the beginning of the pandemic. Additional research to explore changing perceptions over time would be useful.

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