

Teaching Languages Virtually During a Global Pandemic: Perspectives from Post-Secondary Language Educators

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Abstract

This survey study explores how second language (L2) educators at institutions of higher education quickly transitioned from face-to-face (F2F) teaching to an online, technology-based environment during the COVID-19 pandemic, and what their perspectives are on the use of virtual technology after the pandemic. A total of 574 language educators at colleges and universities in the U.S. submitted responses to the survey. Results show that two-year college instructors and women favor the use of virtual technology in L2 education significantly more than instructors at four-year colleges and universities and men overall. In general, the majority of L2 educators surveyed embrace the increase of virtual technology in L2 education.

Keywords: *online teaching, virtual technology in L2 education, language education online, L2 education during COVID.*

Background

Few events in recent history have had such a dramatic impact on second language (L2) teaching methodologies as the global COVID-19 pandemic had in 2020 and 2021. Instructors in higher education institutions had to find alternative methods to continue teaching during this period, and most of them found themselves having to abruptly transition their face-to-face (F2F) courses to emergency remote teaching (ERT) with little notice, support or training. There are many new questions and concerns about the use of technologies for teaching languages remotely, along with new opportunities to take advantage of the lessons learned following the unprecedented COVID-19 global pandemic. One question is whether post-secondary L2 educators have a greater appreciation for online technologies for teaching and learning, or if, as a result of the abrupt transition to ERT, L2 educators have developed a negative attitude towards the increased reliance on technology. Another important question is whether or not colleges and universities will continue to provide students with opportunities for distance L2 learning following the pandemic or will

they mostly revert back to pre-pandemic approaches to language instruction. In one of the largest survey studies of its kind since the onset of the COVID-19 pandemic, a major L2 textbook publisher with an online platform and more than 27,000 language educators, the American Association of Teachers of Spanish and Portuguese (AATSP), and L2 faculty at a mid-sized private university in the Southeast recently collaborated on this study to investigate the aforementioned questions.

Literature Review

The use of technology and blended learning have been gaining popularity as an effective way of teaching and learning (Holcomb et al., 2004; Kane & Rouse, 1999; Seaman et al., 2018; Zhang, 2020). Due to the COVID-19 pandemic, however, schools and universities around the world were forced to rapidly redesign traditional F2F courses to be delivered completely online with very little time to do so (Cutri et al., 2020; Jin et al., 2021; MacIntyre et al., 2020). As the transition was so sudden, many educators had not received training in online language pedagogy.

There were many issues with the transition that caused undue stress on educators. In early 2020, the pandemic forced a large percentage of the U.S. workforce to rapidly transition from office work to working from home. Not everyone, however, had the same access to high-speed internet necessary for downloading materials, videoconferencing, installing apps, working with shared documents and streaming videos (Cutri et al., 2020; Miller, 2021). For many educators, learning to use the technology was a challenge. Many universities, for example, started using video conferencing tools such as Microsoft Teams, Zoom, Google Classroom, Webex, etc. to continue teaching their courses live. With these platforms, issues of privacy quickly became another concern and many students, for different reasons, refused to turn on their cameras or had technical problems with their video and/or audio (Cutri et al., 2020; Miller, 2021; Sangeeta & Tandon, 2020). All these issues have caused additional stress for both students and educators on top of what could already be considered a substantial workload increase.

Furthermore, maintaining student engagement has also been challenging. Many teachers lack the preparation needed for designing interactive and engaging lessons online (McMurtrie, 2020). Due to the sudden shift to remote learning, many teachers did not have the time or the knowledge to develop engaging online lessons. One consequence of the abrupt move to remote teaching has been a transition from student-centered lesson plans to teacher-centered lectures via videoconference platforms (Ahmadi & Ilmiani, 2020; Moorhouse, 2020). Per Egbert (2020) "It may be easier for teachers to focus on providing access to content rather than to worry about how well the content is designed and delivered" (p. 314). Cole et al. (2017) talked about how many online teachers try to replicate what they do in a F2F classroom, but that in order to accomplish the same tasks, one must implement a variety of communication channels. These tools can include audio, video, and multimedia to create a media rich online classroom environment. Again, due to the limited amount of time to transition online, many instructors tried to copy what they were already doing in the F2F class, but they were largely unable to build in the extra media richness into their online classrooms. Also, depending on the type of media required in the various classrooms, there is a cost associated with some digital tools and not

everyone can afford the subscriptions for different websites, permissions of usage, etc. (Ahmadi & Ilmiani, 2020).

Another factor that contributed to the stress of the situation was the lack of emotional connectedness in online classrooms. The extra time most educators had to engage with students or answer their questions just before or right after class was suddenly gone. As Zhang (2020) noted, “connecting two individuals emotionally adds to the experience of being human. The uniqueness of feeling cared for and noticed cannot be replaced by computer emojis” (p.44). The loss of the social connection between educators and learners is difficult and contributes to both teachers’ and learners’ struggles with isolation and loneliness (Bolliger & Inan, 2012). Teaching remotely takes away the opportunity to discuss, in passing with other colleagues, successes and failures in the classroom as well as how we are all coping with the global pandemic in general (Lederman, 2020).

Garrison, et al., 2001, developed a Community of Inquiry (CoI) model that holds three elements as essential to online learning: social, cognitive, and teacher presence. In unpacking each of these elements, the social aspect refers to the community that the students are able to establish with their peers in online classes. For example, Bolliger and Inan (2012) observed that “students may feel part of a community but may still experience high levels of isolation because they have limited opportunities to participate in those learning communities” (p.45). It is crucial that online instructors provide ways for students to collaborate with other students in the class and create a sense of community for the students. If students feel like part of the group and/or community, then their contribution becomes essential and meaningful.

In the CoI model, the second important element for learning in an online setting is the cognitive aspect, which is the “higher-order knowledge acquisition and application, and it is most associated with the literature and research related to critical thinking” (Garrison et al., 2001, p.11). Courses should be designed in a way that allows students to work through the content, reflect on the knowledge gained, discuss within a community, and seek resolutions. This approach is all part of the process of gaining cognitive knowledge in the CoI model. Structuring an online class where students gain critical thinking skills and knowledge is challenging especially if the educator does not have much experience with it.

Finally, teacher presence is the last aspect in the CoI model. Having teachers monitor the discussions and help guide students is crucial for online classes. According to Anderson et al., (2001, p. 9), “A widely documented problem in computer conferencing is the difficulty of focusing and refining discussions so that conversation progresses beyond information sharing to knowledge construction and especially application and integration.” Instructors have a role in not only facilitating the conversations but also designing the activities to impart knowledge, create a sense of community for students, and help them apply that knowledge in practical ways. Building these three aspects into an online class helps students gain more out of the class. The problem with teaching online during the onset of the pandemic was that educators did not have sufficient time to think about these elements nor be trained on how to implement them into online classes effectively.

Even though there have been many factors that increased educators’ level of stress, the shift to teaching completely online has had some benefits too. Maintaining

an open mind and a flexible attitude allowed for positive reactions and a willingness to develop digital competence (Zhang, 2020). Creating engaging tasks for students helps prevent boredom while learning online, and these tasks allow instructors to model positive attitudes (Egbert, 2020). Many educators were willing to revise their teaching for online delivery and they had a sense of hope that their efforts would result in good online teaching (Cutri et al., 2020). In Zhang (2020), one teacher shared that:

teaching became more convenient in an interactive environment, where teacher-student collaboration is highly favored. Integrating different digital tools into language teaching helps teachers to establish an environment that helps cultivate a meaningful experience. (p. 42)

Creating meaningful online learning experiences is a way to keep learners engaged, and in doing so helps both educators and learners develop a more positive attitude. Moreover, remote teaching has allowed students to help educators through the knowledge or lack thereof with executing these technological functions. According to Cutri et al. (2020), many instructors have had to ask for students' assistance when navigating certain functions on new platforms, which, in turn, gave students a sense of empowerment. Sharing power in the classroom due to a lack of expertise in solving technological issues allowed educators to gain a sense of empathy for their students as learners.

Finally, Jin et al. (2021) explored the impact of ERT on 662 U.S. college-level L2 educators' intention to use virtual technologies after the end of the COVID-19 pandemic. The researchers analyzed three factors—perceived values of online language teaching, self-confidence in online language teaching, and the perceived stress of ERT. Jin et al. (2021) found that these three factors correlate significantly with L2 educators' intention to use virtual technologies in the future. The researchers concluded that, in general, the participants in their study had a positive view on adopting technologies for remote language instruction, although many preferred hybrid teaching if given the choice.

As evidenced by previous research studies, the use of technology for remote teaching and learning can have both positive and negative outcomes. These outcomes can be influenced in large part by instructors' training and experience in the use of these technologies, and how successfully they are able to integrate technology into their curriculum. The abrupt transition to ERT in response to the COVID-19 pandemic in 2020, and the slow transition back to more traditional F2F L2 teaching and learning in the fall of 2021 have exposed many issues that must be addressed by academia to gain a better understanding of the role of technologies for remote L2 instruction. In order to address the gaps in our present body of knowledge in this area, this study focused on the three research questions below.

Research Questions

This survey study examined how instructors at post-secondary institutions quickly transitioned from F2F L2 teaching and learning to an online technology-based environment, and what their perspectives are on the increased reliance on technology during the pandemic and in the future. The following research questions guided all aspects of this study:

1. How do L2 educators in higher education feel about the usefulness and effectiveness of technologies for remote/online language instruction following their teaching experiences in 2020 and 2021?
2. Are there any significant differences of opinions between different groups such as men versus women; educators at two-year versus four-year institutions; newer versus more experienced educators, or between educators in different languages?
3. Do L2 educators in higher education believe there will be more reliance on technology after the global pandemic ends and institutions return to more traditional F2F delivery of instruction?

Methodology

The American Association of Teachers of Spanish and Portuguese (AATSP), a major U.S. language textbook publisher, and L2 faculty at a mid-sized private university in the Southeast collaborated to develop a 20-question online survey (Appendix 1) designed to address the three research questions. The survey used multiple-choice items (9), Likert-scale items (3), and open-ended questions (1). Survey questions 6 and 13 served to gather information requested by the publisher to better forecast the post-pandemic needs of post-secondary L2 educators in terms of virtual teaching and learning. University Spanish faculty led the design of the survey using SurveyMonkey, and once approved by the AATSP and the publisher, it was sent out via email in March of 2021. Independent-sample *t*-tests and single factor ANOVAs were used to analyze the quantitative data, while the open-ended responses to question 20 were downloaded and analyzed looking for common themes.

Participants. A link to the online survey was sent via email to all current and past post-secondary members of the AATSP and to the over 20,000 French, German, Italian, Spanish, and “other” L2 educators throughout the U.S. who use the publisher’s L2 textbooks. In total, 574 L2 educators responded to the survey. The raw data from all 574 respondents was compiled in an Excel spreadsheet for analysis. Of the 574 survey responses, 115 (20%) were males, 433 (75.4%) were females, and 26 (4.6%) chose “Other” or “Prefer not to say.” Furthermore, 107 (18.6%) teach at 2-year colleges, while 476 (83%) teach at 4-year colleges and universities. Nine (1.5%) teach at both. In addition, 116 (20.21%) of the respondents teach French, 22 (3.8%) teach German, 42 (7.3%) teach Italian, 417 (72.6%) teach Spanish, and 25 (4.3%) teach other languages. All the responses were fairly well distributed among the L2 proficiency level taught; beginner-level (418), intermediate-level (393), and advanced-level instructors (301), with many respondents teaching more than one level. Finally, of the 574 respondents, the majority (414 or 72.13%) were experienced educators with more than 15 years of teaching experience, 92 (16%) had 10-15 years of experience, 51 (8.9%) had 5-10 years, and 19 (3.3%) had five or fewer years of teaching experience.

Results

Questions 10 and 11 of the survey asked participants what percentage of their language courses were completed via virtual technology prior to and during the COVID-19 pandemic. Figure 1 shows the differences between the two sets of responses.

Figures 1 and 2

Percentage of Coursework Completed Online Prior to and During the Pandemic

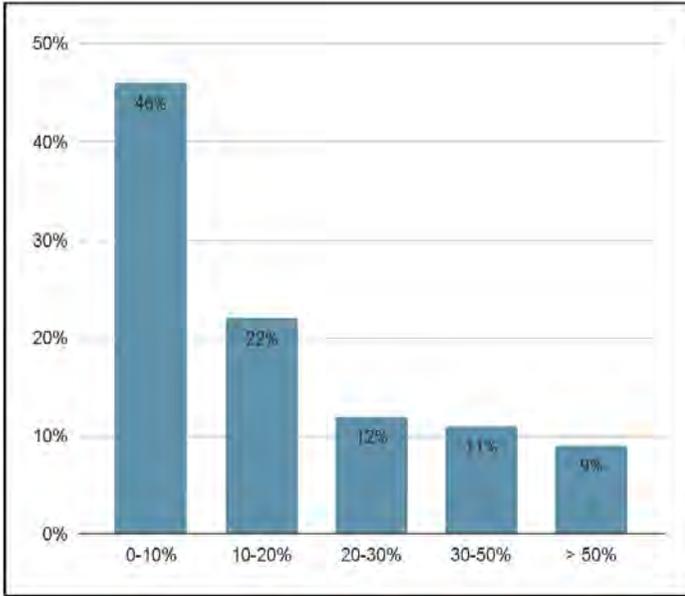


Figure 1: Prior to COVID-19

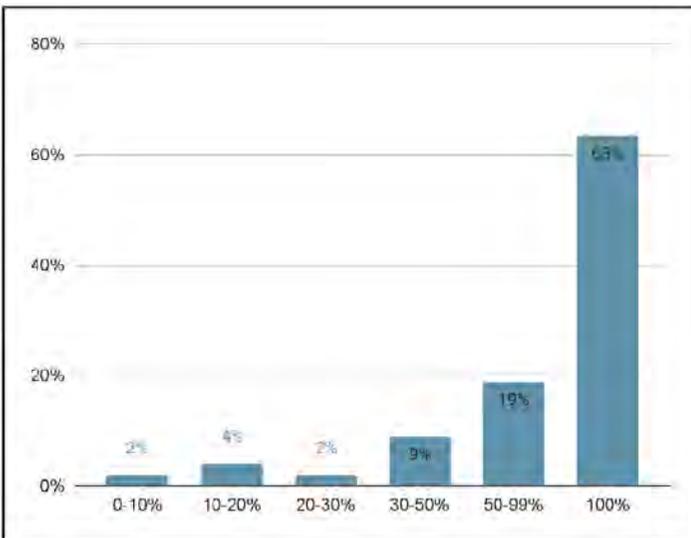


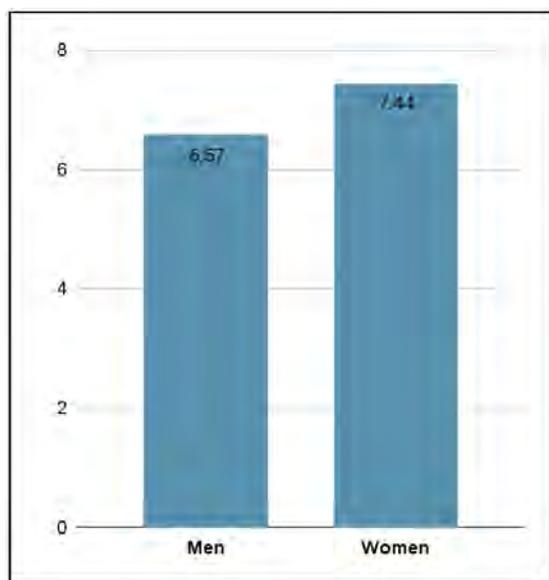
Figure 2: During COVID-19

The results from Questions 10 and 11 clearly show a major shift towards an online technology-based teaching environment from the fall of 2019 to the spring 2020 semesters when COVID-19 spread rapidly throughout the world.

Survey question 14 asked participants to rate, on a scale from 1 to 10, with ten being the most positive experience, how their experience using virtual technologies during the pandemic changed their perceptions on the use of technology in language instruction. The mean for all participants was 7.2 out of 10 (SD 2.43). However, some significant differences in ratings ($p < 0.001$) were found between men and women respondents (Figure 3), and between 2-year and 4-year college and university respondents ($p < 0.001$) (Figure 4). Surprisingly, there were no statistically significant differences ($p < 0.67$) in the responses to this question between newer L2 educators (0-5 years) and other more experienced educators (5-10, 10-15 and >15 years), or between L2 educators who teach different languages ($p < 0.7$).

Figure 3

Satisfaction (scale 1-10) in using online technology during COVID - men vs. women

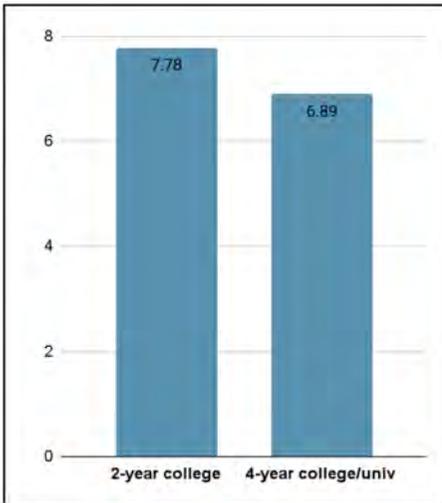


For men, their mean level of satisfaction with using online technology during the pandemic was 6.57 out of 10 (SD 2.63), while women's mean level of satisfaction was 7.44 out of 10 (SD 2.3). According to the single factor ANOVA conducted, there was a significant statistical difference between the two groups ($p < 0.001$) with women having a more positive experience with the use of virtual technology for L2 instruction during the pandemic than men.

When expressing their level of satisfaction with using online technology during the pandemic, two-year college L2 instructors had a mean of 7.78 out of 10 (SD 2.42), while their 4-year college/university colleagues had a mean of 6.89 out of 10 (SD 2.44) (Figure 4). A single factor ANOVA highlights a significant statistical difference between the two groups ($p < .001$). Two-year college educators report a significantly more positive experience with the use of virtual technology for L2 instruction during the pandemic than their 4-year college/university colleagues.

Figure 4

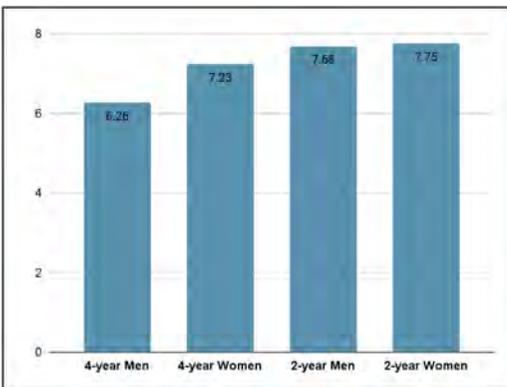
Satisfaction (scale 1-10) in Using Online Technology During the Pandemic: 2-year vs. 4-year Institutions



Question 15 of the survey asked participants to rate, on a scale from 1 to 10, with ten being *highly useful*, how much they believe that the use of virtual technologies in L2 courses are useful for language learning. The mean rating for all respondents was 7.0 out of 10 (SD 2.45). Again, one-way ANOVA analyses found significant differences in ratings between 2-year and 4-year college/university respondents ($p < 0.01$) (Figure 5), and between men and women ($p < 0.0001$) (Figure 6). Surprisingly, as with the previous question, there were no statistically significant differences in the responses to this survey item between newer L2 educators (0-5 years) and more experienced (> 5 years) instructors ($p < 0.05$), or between L2 educators who teach different languages ($p < 0.05$).

Figure 5

Usefulness (scale 1-10) of Virtual Technology for L2 Instruction

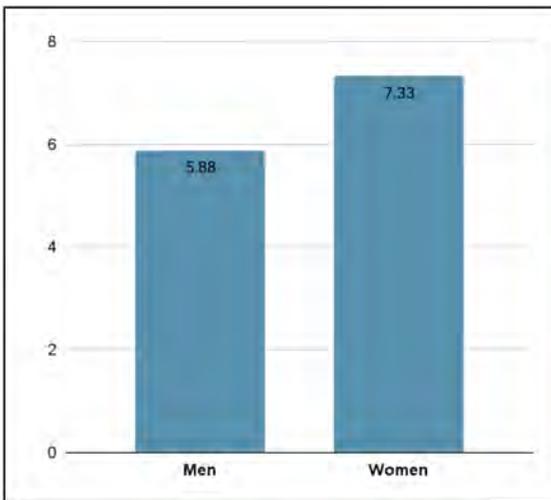


There were, however, significant differences ($p < 0.01$) in the responses between instructors at two-year ($M = 7.71$) and at four-year colleges/universities ($M = 6.74$) (Figure 5). Overall, the ratings were favorably high. However, instructors at 2-year colleges gave a more positive rating to the usefulness of virtual technology in L2 instruction than their counterparts at 4-year colleges/universities ($p < .001$).

The largest statistical difference ($p < .0001$) found in the answers to this survey item was between men and women. When asked to rank on a 1-10 scale the usefulness of virtual technology in L2 instruction, the men's mean was 5.88 (SD 2.68) while the women's mean was 7.33 out of 10 (SD 2.3).

Figure 6

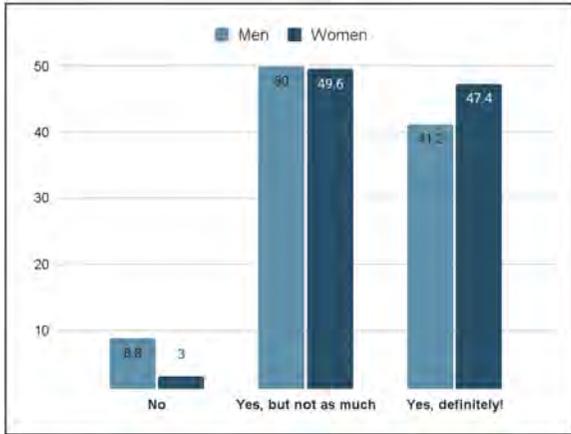
Usefulness (scale 1-10) of Virtual Technology for L2 Education: Men vs. Women



To help answer research question three (Do L2 educators in higher education believe there will be more reliance on technology after the global pandemic ends and institutions return to more traditional F2F delivery of instruction?), survey item 16 asked participants whether or not they would continue to use virtual technology in their L2 courses once the pandemic ends and their institutions resume F2F delivery of instruction. Again, as with the previous two questions, there were no statistically significant differences ($p < 0.67$) between the answers provided by newer (0-5 years) instructors and more experienced ones (5-10, 10-15 and >15 years). Unlike the previous two questions, however, men and women gave answers that were not statistically different (Figure 7). However, 47.5% of women stated that they would *definitely* continue using more virtual technology in their courses compared to 41% of men who stated the same, and 8.8% of men stated they would not continue using virtual technology in their courses compared to only 3% of women, continuing with the trend from survey items 14 and 15.

Figure 7

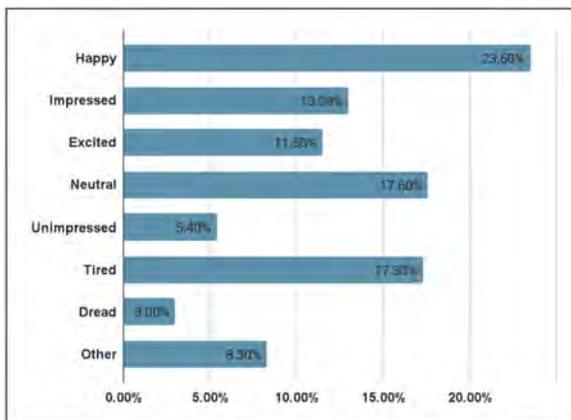
Continue Using Virtual Technology after the Pandemic: Percentages of Men vs. Women



Survey Question 17 asked participants to choose one word that best describes their views toward the use of virtual technologies for L2 teaching and learning once the pandemic is over. Survey respondents were given seven different words to choose from, i.e., happy, tired, impressed, unimpressed, excited, dread, neutral, and other. The word that was picked the most (23.5 percent of participants) was *Happy*. The word that was picked the least was also the most negative word, *Dread*. In total, 48% of respondents chose one of the positive words, i.e. happy, impressed, or excited, while 26.4% chose one of the negative words, i.e. unimpressed, tired, and dread. Also, 17.56% of survey respondents chose *Neutral*, and 8.3% provided their own words and phrases, most of which were also positive. Figure 8 below displays a distribution of the words chosen.

Figure 8

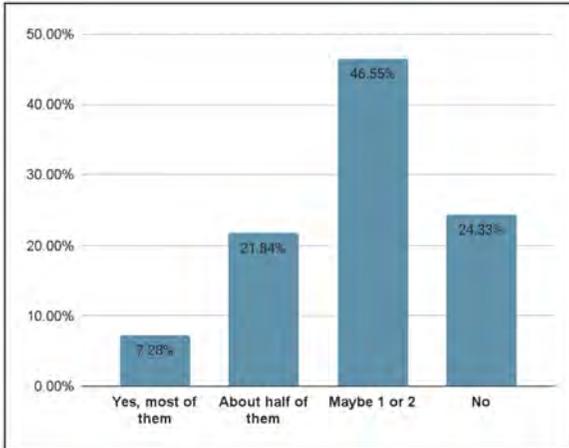
Words Chosen to Best Describe Educators’ Feelings Toward the Continued Use of Virtual Technology after the Pandemic



Also, to help answer Research Question 3, Question 18 asked participants whether or not their institutions would continue offering remote learning options for their L2 students. In total, roughly 75% of respondents believed their institutions would continue to offer remote learning options for L2 students (Figure 9). Therefore, most participants anticipated continuing using some form of virtual technologies once the pandemic ends.

Figure 9

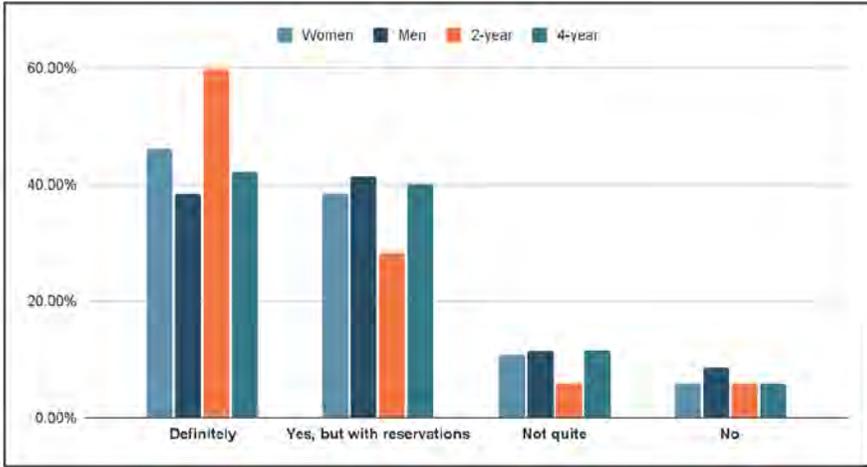
How Many L2 Courses Will Be Offered Remotely Post-Pandemic



Finally, the research team turned to Question 19 in their pursuit to fully answer Research Question 3. This item asked participants whether or not they felt ready to embrace more virtual technology in their language classrooms once the pandemic ends. Almost 85% of all respondents said *definitely* or *yes*, while only 17% said *no* or *not quite*. In these answers, there were no statistically significant differences in the responses between men and women; between two-year and four-year institutions, or between French, German and Spanish instructors. However, following the patterns from the prior survey items, women were slightly more inclined to embrace more virtual technology (84.76% responded *Definitely* or *Yes*) than men (79.8% responded *Definitely* or *Yes*), and two-year college instructors again were also slightly more inclined to embrace more virtual technology (88.23% responded *Definitely* or *Yes*) than their four-year college/university peers (82% responded *Definitely* or *Yes*) (Figure 10).

Figure 10

Readiness to Embrace More Virtual Technology in the Classroom Post-Pandemic.



Discussion

Much of the feedback provided by the participants in the open comment section of the survey support the feedback received in similar studies (see Bozkurt and Sharma, 2020; MacIntyre, Gregersen and Mercer, 2020; Moser, Wei, and Brenner, 2021; Trust and Whalen, 2020) in that educators who had little to no experience using online educational platforms or teleconferencing technologies found themselves having to quickly learn and transition to these technologies almost overnight while trying to keep their students engaged in their learning as much as possible. Educators who had already adopted some of these technologies in their classrooms, and those who had experience with online learning, were able to handle the transition better than educators who did not. Many L2 educators who depended less on the use of online technology and more on interactive, F2F communicative classroom activities found traditional communicative methodologies to be challenging to do in an online classroom environment without the proper training and experience.

Survey Questions 10, 11 and 12 were aimed to determine roughly what percentage of post-secondary L2 courses shifted from a F2F instruction in 2019, prior to the COVID-19 pandemic, to a virtual environment during the pandemic in 2020 and 2021. The findings were fairly predictable, as many school closures were reported not just in the U.S. but throughout the world. Social distancing mandates made it difficult for L2 instructors to continue using the same teaching methodologies they were using pre-pandemic. In addition, many students living with pre-existing health problems or who simply feared exposure to the virus had to remain at home for most of the 2020-2021 academic year, which forced academic institutions to offer, or entirely switch to, remote learning options for students. Hodges et al. (2020) remarked that the campus support teams are usually available to help a small group of faculty with online classes, but due to the quick time frame of everyone going remote, these

support teams could not effectively support all of the faculty in the transition to ERT. Therefore, instructors had to be creative to figure out this transition for their respective classes which can be a factor that causes stress. With a short time frame to transition to remote teaching and a lack of instructional support, many faculty undoubtedly felt overwhelmed in these circumstances as evidenced by the findings of this study.

According to the results from this survey, only 8.6% of respondents were offering more than 50% of their coursework via virtual technology prior to the COVID-19 outbreak in the U.S. Prior to the pandemic, most study participants (91%) relied on virtual technology for less than 50% of their coursework, and 43.3% stated that zero to ten percent of their coursework had to be completed online (Figure 1). However, during the pandemic in the spring of 2020, almost two thirds (63.36%) of respondents switched 100% of their coursework to an ERT environment. Only 2.1% of participants continued teaching mostly F2F during the 2020-2021 academic year, and roughly 34.5% switched to a hybrid teaching environment where part of the lessons were online and parts were still offered in a classroom (Figure 2). Xu and Jaggars (2013) reported that typical students taking online courses have lower motivation to finish the course than those students in a F2F course. Thus, it is very likely that higher ed L2 students' motivation was negatively affected during the 2020 and 2021 academic years when two thirds of educators switched to 100% remote teaching.

Items 14, 15 and 16 sought to understand how L2 educators in higher education feel about the usefulness and effectiveness of virtual technologies in language education, and whether their previous opinions changed following their teaching experiences in 2020 and 2021 (Research Question 1). Finally, on survey item 16 (if you had to increase your reliance on virtual technology during COVID, once the pandemic is over and your institution resumes traditional F2F teaching, will you continue to use online technologies in your language), 96% of participants responded with *Yes, definitely* or *Yes, but not as much*. Only 24% selected *No*. Thus, from the results of this survey we can infer that the majority of L2 instructors that participated in this survey had a positive experience with the use of virtual technologies in their language courses during the pandemic and are open to continuing the use of some of these technologies in the foreseeable future.

The findings also indicate that both men and women, and instructors at two-year versus four-year institutions differ significantly in their perceptions towards usefulness of technology and ease of use in L2 education, with women having a more positive view of virtual technology than men, and instructors at two-year colleges also having a more positive view of virtual technology than instructors at four-year colleges and universities.

According to Lai and Kuo (2007), gender difference is an important theme in the field of linguistics because it influences the design of curriculum, teaching methodologies, instructional strategies, and students' learning processes. In other fields, the literature on gender differences on the use of technology in the classroom find men tend to favor the use of technology in education more than women (e.g. Fauville et al., 2021; Jamieson-Proctor et al., 2006; Marbán & Mulenga, 2019; Teo et al., 2015; Wiseman et al., 2018; Zhou & Xu, 2007). However, most of the participants in these studies taught in the hard sciences and computing fields, which are disciplines that

traditionally employ more men than women. In the context of L2 teaching, there is a predominance of women, including instructors with varying nationalities and cultural backgrounds, and thus, gender differences in the perceived role of virtual technology and its usefulness in language education may differ from those in the hard sciences and engineering. Guillén-Gámez et al. (2019) for example, found that among L2 teachers in their study, gender “does influence the level of pedagogical digital competence” (p. 1). In their study, Guillén-Gámez et al. found that males had a higher level of confidence in and usage of technology compared to females. They also suggest, however, that this gender gap is becoming less evident with the increased prevalence and importance of digital technologies in society and in higher education.

The participants in this study, however, show that women L2 instructors in higher education have a more positive opinion on the use of virtual technologies in education than men, suggesting perhaps that L2 educators differ from educators in other academic fields in their perceptions on the role of virtual technologies in education. However, according to figures provided by the AATSP, over 68% of language educators in the U.S. are women, compared to only 27% of instructors in the science, technology, engineering, and mathematics (STEM) fields (2020 U.S. Census). More empirical research could determine the role gender plays in the perceived satisfaction with the use of virtual technology in education between different academic fields.

Significant differences emerged in the perceived levels of satisfaction with, and the usefulness of, virtual technology in L2 instruction between two-year college and four-year college/university instructors. Previous research has not fully explored the differences in opinions about the use of virtual technology in education between these two groups. However, since two-year colleges offer more online courses than four-year colleges and universities (Shea, 2007), it is likely that instructors at community or junior colleges simply have more experience teaching online courses, and thus, may have more experience and a more favorable view of virtual technology in education. Xu and Jaggars (2013) have also stated that “most community colleges have already expanded substantial resources to support online learning” (p.55). The key seems to be that some colleges have a support team dedicated to serving its faculty in creating high quality online classes that maintain student engagement. As four-year institutions offer more online courses at reduced prices to remain competitive (Gallagher & Palmer, 2020), it is becoming evident that instructors at these academic institutions must find ways to gain the necessary training and experience in the use of virtual technologies in education to remain relevant in the future. According to data from the U.S. Department of Education, one-third of all U.S. college students had some type of online course experience before the pandemic as cited in Gallagher and Palmer (2020). The results from this survey (Figure 9) suggest that this number will likely increase in the coming years following the pandemic.

As far as the differences in opinions between L2 instructors with fewer years of experience (0-5 years) and those with more teaching experience (5-10, 10-15 and >15 years), this study found no significant differences. It is well established that educators’ receptiveness to, and ability to use, virtual technology in the classroom is strongly correlated with their experience and training in the use of technology in education (Cox, 2013). Many older educators did not receive training in the use of modern technology for educational purposes in their academic training, even

though many received this training as part of their in-service professional development. As Cox (2013) states:

[m]ore tenured teachers are different from their younger colleagues in that they did not receive the same quantity of preservice technology integration instruction as part of their teacher education as their younger counterparts. (p. 209)

Despite the common perception that younger educators are savvier with technology in the classroom than more veteran instructors, the present study shows that among post-secondary L2 instructors, there are minimal, non-significant differences in the perceptions of the use of virtual technology in L2 instruction between less experienced instructors and more veteran ones. In addition, no significant differences were found between French, German, and Spanish L2 instructors.

Finally, according to the results of this survey (Figures 7-10), the majority of post-secondary L2 instructors believe that there will be an increased reliance on virtual technologies and remote language teaching and learning in the future. Almost 85% of respondents stated that they will continue using virtual technologies post-pandemic, while only 17% stated they are not quite ready. These results support recent conclusions by Jin et al. (2021) that “U.S.-based college-level world language educators were generally positive about adopting online language teaching in post-pandemic times” (p. 412).

Future Research

Findings from the present study support the argument that women L2 educators at colleges and universities in the U.S. favor the use of virtual technology for remote teaching more than men. However, do L2 educators differ from educators in other academic fields in their perceptions on the role of virtual technologies in education? Do instructors in the STEM fields differ from those in the humanities in their experience with, and use of technology in the classroom? Are there differences between genders within and between these fields? Future research should continue to evaluate the differences in the use of virtual technology in the L2 classroom between the genders and between the different fields of education.

Future research should also focus on the amount of online technology instructors maintain in the classrooms in the post-COVID era. Since many instructors have to find a balance between online teaching and F2F time in the classroom, researching how much instructors are incorporating online technology into their teaching in the post-COVID era and comparing it to how it was in the pre-COVID era would show if there has been a significant shift in methodologies due to the COVID-19 pandemic. This would help evaluate the impact the pandemic has had in L2 education and whether or not COVID-19 transformed the way instructors teach second or foreign languages.

Conclusion

It would be an unfair comparison to judge the remote learning instruction that took place during the pandemic to traditional F2F instructional delivery. The speed with which institutions moved their courses from F2F to an online, remote learning

environment was “unprecedented and staggering” (Hodges et al., 2020, p. 2). Campus technology support personnel at academic institutions were not able to offer the same level of support to entire faculties in such a narrow window of time, and faculty members found themselves having to improvise quick solutions in less-than-ideal circumstances during the pandemic (Hodges et al., 2020). This situation caused stress to many educators. The present study, however, showed that this may not be the case for most L2 instructors, or at least not to the extent many may suspect. Overall, according to the results of this survey, the vast majority of post-secondary L2 instructors have a positive view of virtual technology and are ready to embrace more of it in L2 instruction.

Levy et al. (2015) stated that “Computer Assisted Language Learning (CALL) design is about constructing CALL environments purposefully such that learning does not occur by accident, but through an understanding of the key factors or variables that impact upon it” (p. 3-4). Due to the nature of how fast educators had to transition their classes to online platforms, it is apparent that purposeful design was not always an aspect of this transition. According to Cutri et al. (2020), teachers were tempted to revert back to some predominately teacher-centered pedagogy due to the strain of the pandemic. However, the necessity of the rapid shift away from F2F instruction to remote instruction provided the field with an opportunity to improve current L2 teaching practices. Not only do most post-secondary L2 instructors want to continue using virtual technologies but they have a positive outlook on doing so. As MacIntyre et al. (2020) noted, developing courses that work well in the online environment, however, takes time as well as a special skillset to know how to teach them well. Zhang (2020) mentioned that an exploratory spirit to experiment with pedagogical possibilities in the use of virtual technologies is important in helping to create digital competence. Since the pandemic presented a crisis, expectations for both educators and learners were relaxed to help alleviate the abrupt shift to teaching and learning online and all of the challenges that this unexpected transition presented. As Maggioncalda (2020) stated,

As universities develop their own digital competencies, what has started as a short-term response to a crisis will likely become an enduring digital transformation of higher education (para. 5).

Going forward, institutions should offer digital support and time for instructors to upgrade their skills with digital competencies. Furthermore, institutions of higher education should offer more opportunities for professional development in instructional design and online language pedagogy so that instructors will be better prepared for the next ERT situation.

Institutional support and instructors’ motivation play a role in promoting or inhibiting the development of instructors’ digital competencies (Zhang, 2020). This is crucial since 75% of the participants in this study anticipate the continued use of virtual technology in their classrooms post-pandemic (Figure 9). Some studies at the community college level have shown that instructors feel alone in creating online courses and lack training and continued support (Cox, 2006; Pagliari et al., 2009). This could be cause for some of the disparity that was found between two-year and four-year post-secondary institutions.

As evidenced by the responses to this survey study, 84% of the participants feel ready to embrace the use of more virtual technology in their courses. It is important that educators be provided with time to explore their own virtual technologies that foster meaningful experiences and engagement. As Anderson et. al (2001) stated, “in the process of designing and using these tools, teachers are forced to be learners themselves and like all who experience learning, the learners themselves are changed” (p. 15). It is possible that the pandemic has opened up educators, both novice and veteran, to the advantageous and positive aspect of digital tools. However, how best and how much to incorporate these tools into the classroom is another debate where most educators are striving to find the balance.

According to Zhang (2020), “teachers’ voices about digital language teaching are hardly heard” (p. 37). This study is unique in that it provided L2 educators with an opportunity to indicate their experiences with teaching L2 languages virtually during a pandemic and where they want to go from here. This study revealed that there were some disparities between men and women’s perceptions and attitudes as well as between the types of post-secondary institutions, two-year or four-year. However, this study shows that among all the chaos of the quick transition to ERT, most of the survey respondents have embraced the experience with a positive attitude.

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Appendix A

AATSP & Vista Higher Learning Survey

The use of virtual technology during and after COVID-19

Demographic questions:

1. Select whether you teach primarily at a 2-year or a 4-year college or university.
 - a. 2-year college
 - b. 4-year university
2. Your gender
 - a. Male
 - b. Female
 - c. Other
 - d. Prefer not to say
3. Select the language(s) you teach.
 - a. Spanish
 - b. French
 - c. German
 - d. Italian
 - e. Other (specify)
4. Select the level(s) you primarily teach.
 - a. Beginner
 - b. Intermediate
 - c. Advanced
5. How long have you been teaching?
 - a. 0-5 years
 - b. 5-10 years
 - c. 10-15 years
 - d. Over 15 years
6. Which publisher's virtual platform are you using in your course?
 - a. vhlcentral
 - b. WileyPLUS
 - c. Pearson MyLab
 - d. CENTAGE MindTap
 - e. None
 - f. Other (specify)

7. Select the professional language association in which you are a member.
 - a. American Association of Teachers of German
 - b. American Association of Teachers of French
 - c. American Association of Teachers of Italian
 - d. American Association of Teachers of Spanish and Portuguese
 - e. None of the above

Teaching during and after the COVID-19 Pandemic

8. During the spring and fall of 2020, which of the following instruction modalities did you primarily use for your language instruction?
 - a. Remote teaching
 - b. In-person teaching
 - c. Blended or hybrid teaching
 - d. Online synchronous
 - e. Online Asynchronous
 - f. Other (specify)
9. Which of the following teaching modalities are you primarily using this spring of 2021?
 - a. Remote teaching
 - b. In-person teaching
 - c. Blended or hybrid teaching
 - d. Online synchronous
 - e. Online Asynchronous
 - f. Other (specify)
10. Prior to the COVID-19 pandemic, what percentage of your language courses was completed via virtual technology?
 - a. 0-10 %
 - b. 10-20 %
 - c. 20-30 %
 - d. 30-50 %
 - e. More than 50%
11. During the COVID-19 pandemic, what percentage of your language courses was completed via virtual technology?
 - a. 0-10 %
 - b. 10-20 %
 - c. 20-30 %
 - d. 30-50 %
 - e. 50-99 %
 - f. 100 %

12. Today, what percentage of your language courses is being completed via virtual technology?
- 0-10 %
 - 10-20 %
 - 20-30 %
 - 30-50 %
 - 50-99 %
 - 100 %

13. How satisfied are you with your publisher's virtual platform?
- | | | | | | | | | | | |
|------------------|---|---|-------------|---|---|-----------|---|----------------|---|----|
| N/A | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Very unsatisfied | | | Unsatisfied | | | Satisfied | | Very satisfied | | |

14. On a scale from 1 to 10, how has your experience using virtual technologies during the pandemic changed your perceptions on the use of technology in language education?
- | | | | | | | | | | | |
|------------------|---|---|-------------|---|---|-----------|---|----------------|---|----|
| N/A | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Very unsatisfied | | | Unsatisfied | | | Satisfied | | Very satisfied | | |

15. On a scale from 1 to 10, how much do you believe that the use of virtual technologies in foreign/second language courses are useful for language learning?
- | | | | | | | | | | | |
|------------------|---|---|-------------|---|---|-----------|---|----------------|---|----|
| N/A | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Very unsatisfied | | | Unsatisfied | | | Satisfied | | Very satisfied | | |

16. If you had to increase your reliance on virtual technology during COVID, once the pandemic is over and your institution resumes normal teaching, will you continue to use online technologies in your language courses?
- Yes, definitely!
 - Yes, but not as much
 - No

17. Choose one word that best describes your views toward the use of virtual technologies for language teaching and learning after the pandemic.
- Happy
 - Tired
 - Impressed
 - Unimpressed
 - Excited
 - Dread
 - Neutral

- h. Other (please specify)
18. As far as you know, will your institution continue teaching remote language courses after the pandemic ends?
 - a. Yes, most of them
 - b. About half of them
 - c. Maybe one or two
 - d. No
 19. Do you feel ready to embrace more virtual technology in your language classroom once the pandemic is over?
 - a. Definitely
 - b. Yes, but with reservations
 - c. Not quite
 - d. No
 20. Please share any other comments you may have below: