ONLINE PROFESSIONAL DEVELOPMENT OPPORTUNITIES: VIRTUAL CONFERENCING DURING A PANDEMIC

Rebecca Smith, University of Portland
Nicole C. Ralston, University of Portland
Hillary Merk, University of Portland
Jacqueline Waggoner, University of Portland

ABSTRACT

This descriptive study provides an overview of research-based benefits and challenges of attending online conferences, in addition to participant feedback data from one online education conference conducted in February 2021, during the COVID-19 pandemic. This research is grounded in adult learning theory. The purpose of this study was to explore conference participant perceptions (n = 51) of their learning at this virtual education conference with the goal of contributing to future best practices in online professional learning experiences. Post-conference survey data indicated that 98% of participants reported that the sessions were of high quality and the presenters were prepared. However, there were statistically significantly (p = .043) more participants who enjoyed face-to-face conferences compared with online conferences. Additionally, over 90% of participants agreed that the content from the conference would benefit their students and improve their own research practice. Recommendations for facilitating effective online conferences include: 1) Organize and communicate consistently and with clarity; 2) Utilize technological platforms that are familiar to participants; 3) Consider the sociopolitical context in which the conference occurs. This research can inform virtual conference organizers in effective planning and facilitating of online professional development experiences that align with adult learning theory components.

Keywords: online learning, professional development, teacher learning, andragogy

Conferences have existed as a learning platform for centuries, largely unchanged in the format of a presenter sharing knowledge with an audience (Reshef et al., 2020). Prior to COVID-19, conferences were frequently seen as opportunities for professional networking, learning, skill building, career development opportunities, and engagement with research (Mata et al., 2010; Morse, 2008; Tomaszewski & MacDonald, 2009). Furthermore, conferences can provide participants with exposure to new technologies, ideas that can lead to

publications, and novel ideas that can further research (Oester et al., 2017). One of the main criticisms and potential barriers to attending in-person conferences is the expense. Prior to COVID-19, conferences typically required travel to a large city, food and lodging expenses, and steep conference registration fees (Wayne et al., 2008). However, COVID-19 has forced all forms of learning, including conferences, to be conducted virtually. These online learning platforms, however, bring both benefits and challenges to the conference

experience, which are explored in this study.

PURPOSE OF THIS STUDY

The prevalence of online professional learning as a result of the COVID-19 pandemic calls for research on the efficacy of these virtual learning environments. Both large-scale conferences, such as the American Educational Research Association's (AERA) annual meeting, and regional or institutional virtual learning opportunities must be carefully planned to support participants technologically and beyond. The purpose of this descriptive research was to explore virtual conference participant perceptions of their learning at a virtual education conference called Oregon Association of Teacher Educators (ORATE) with the goal of contributing to future best practices in online professional learning experiences. The three research questions were: 1) What were the perceived learning outcomes of attending this virtual education conference? 2) What were the perceived benefits of an online conference format? 3) What were the perceived challenges of an online conference format?

THEORETICAL FRAMEWORK

This research was informed by Knowles' (1980) adult learning theory, or andragogy. This theoretical framework includes several assumptions about adult learning. First, adults are self-directed in their learning, and an adults' lived experiences are a great source of learning for them. Further, the social role an adult has influenced their readiness to learn, and adults are problem-centered in their learning, seeking to apply learning to their lives. Additionally, Knowles (1984) argues that adults have internal motivations and also need to see the reason behind their learning. This framework on adult learning theory aligns with this research project, which focuses on the learning of adult participants in a virtual conference. The education practitioners who attended this conference brought their lived professional experiences, in addition to the social context of learning during a global pandemic. The diversity of the participants in this study likely impacted the learning experiences of each individual learner.

RESEARCH-BASED BENEFITS AND CHALLENGES OF ONLINE CONFERENCES

As a result of the COVID-19 pandemic, conferences in all fields of learning transitioned to virtual formats if they were not cancelled entirely (Fulcher et al., 2020). Research published throughout the pandemic highlights the impact of these conferences in various contexts. For instance, the British Society for the History of Science hosted a digital conference via Twitter with the goal of connecting historians of science from across the globe (Houghton et al., 2020). The digital format of this British conference was necessary in the current context, but the carbon footprint reduction due to eliminating travel for all participants led the authors to argue that digital conferences should be central to academic operations of the future.

In addition to the environmental and health benefits of virtual conferencing during a global pandemic, the innovative nature of revisioning conferencing can breathe life into traditional conference structures. Increased access to the content appears to be a positive impact of the online learning platform. Banerjee and Brassil (2020), who reported on a U.S. national conference for oncology nurses, found increased attendance from nurse participants, especially from individuals who previously may not have been able to attend due to cost barriers. An additional example of an online-only conference for photonics, a field about sources of light and optics, occurred in January 2020 and gathered 1,100 virtual participants (Reshef et al., 2020). Reshef et al. (2020) highlighted the fact that scientific conferences have looked similar for centuries, and COVID-19 forced a needed change. Yet, the pandemic adjusted the conference planning: "Our vision was to provide a free, globally accessible meeting in which neither the speakers nor the participants needed to travel" (p. 253). These efforts to be inclusive required certain similar components to successful in-person conferences, such as a need for a strong infrastructure and clear communication for a successful conference. Reshef et al. (2020) also recommend that virtual conference planners obtain information technology (IT) support and use a website platform for submission of abstracts, registration, and advertising to be successful. Reliable technology-based platforms and support are critical for a successful virtual conference.

There are also many challenges to virtual conferences, some that can be mitigated with

careful planning and resources, and some that are unavoidable. For instance, the lack of emotional engagement that stems from face-to-face professional development is unavoidable (Reshef et al., 2020). One study (Weber & Ahn, 2020) found that 62% of their 81 survey respondents reported a decrease in engagement in online conferences. Offering supplemental chat rooms for participants to continue conversations is one way to mitigate this problem, especially if there is sufficient time between sessions for attendees to continue conversations and still attend their next session. Pedaste and Kasemets (2021) recommend that organizers of virtual conferences dedicate attention to supporting socialization of participants, particularly when they are attending from various time zone across the globe. Despite these social challenges, a virtual environment can also reduce social anxiety or barriers experienced by some participants in a face-to-face setting (Lortie, 2020).

Further, technology challenges are a consistent struggle—for example, audio and video quality and connectivity, including screens freezing if the remote conference is live (Reshef et al., 2020). One conference (American Association of Colleges for Teacher Education, 2021) tried to combat some of the common technical issues of a virtual conference by having the presenters record their presentations ahead of time. Then the recording was played when the session was scheduled to begin. This method avoided such issues as low connectivity, but it essentially eliminated interaction among presenters and attendees. Despite these challenges, it is possible for a virtual conference to be effective, as indicated by positive post-conference feedback (Resef et al., 2020).

It appears that teachers and learners have grown accustomed to online platforms and can recognize the pros and cons of these virtual spaces. Most likely, future professional conferences will involve an integration of lessons learned from pandemic times. No matter if a conference is held face-to-face, virtually, or in a hybrid format, the goals of promoting intellectual discourse among participants must remain a critical goal in the design and implementation of the conference (Lortie, 2020).

CHALLENGES AT 2021 AMERICAN EDUCATIONAL RESEARCH ASSOCIATION (AERA) VIRTUAL MEETING

One of the largest educational research organizations, the American Educational Research Association (AERA), hosted its 2021 annual conference online in April 2021. Rather than using a traditional platform such as Zoom, AERA contracted with Scarrit Group, Inc., an event management company that was to provide a more interactive virtual space that was intended to look like the physical space of a face-to-face conference. For instance, there was a hotel lobby virtual background on the conference platform where participants could engage in a public chat, a private or group chat, or a phone call with other participants in that same virtual space. Data were not available to these authors as to what extent participants used these features during the conference. The conference breakout sessions also contained virtual spaces intended to reflect the appearance of an in-person conference space, according to the online training sessions (AERAa, 2021); there was a picture of a round table for roundtable sessions, and there were rows of chairs with a large screen for paper sessions. The stated goal in the training was for participants to feel like they were attending AERA in the traditional, interactive, and collaborative in-person way.

AERA leadership touted this platform as even more accessible than an in-person conference. For instance, all sessions were recorded and saved in an "On Demand" section of the platform for registered applicants to view any time within the year following the conference. Further, they shared an Access Plan in their conference platform training video, which included making the conference more accessible by requiring (a) deliberate pacing to support healthy minds and bodies; requiring presenters to follow access guidelines; (b) having American Sign Language (ASL) interpreters easily visible and present at all major sessions and having access to papers for advanced preparation; (c) accessing technological support during the conference; and (d) accessing an on-demand library after live events (AERA, 2021a). According to the AERA (2021b) website, the 2021 conference had "thousands of scholars from education research and aligned fields and disciplines," and the conference offered over 2,200 high quality sessions. It is unknown to the authors if this international academic group of professionals took advantage of the many methods and virtual spaces for personal

connections that AERA embedded in the 2021 conference, or how many watched the training videos to prepare for this new virtual platform.

Despite AERA's efforts to be innovative in their platform choice, the platform largely failed to deliver, and the challenges with attending and presenting online were seemingly endless. On Day 3 of the 2021 conference, AERA's Executive Director, Felice Levine, emailed all conference participants apologizing for numerous technical problems on the conference platform and describing changes and improvements the platform was making. This email was followed by an email from the platform's virtual provider, Scarritt Group, Inc.'s Vice President, Peter Lahr, also apologizing for technical difficulties and providing presenter tips. Later that same day, AERA's Levine emailed again offering all AERA 2021 paid registrants a full refund for the conference upon request or a credit to the 2022 annual meeting registration, stating:

> *We very much regret the continued technical problems and challenges that have beset many of our sessions, in particular those with large attendance. We apologize for this unacceptable circumstance that in no way met our vision and expectations for a virtual conference...We also want to acknowledge how much every participant invested in time and energy to produce important work. We appreciate that this work reflects your scholarly efforts over many, many months or more during a time of stress. You had every reason to expect an opportunity of high quality and high standard; the platform we provided sadly fell short. We regret that we let you down. (F. Levine, personal communication, 11 April, 2021)*

The major conference divisions, such as Division K: Teaching and Teacher Education, moved many of their key sessions to a Zoom platform. Attendance at these sessions was largely lower from typical years, and the verbal feedback in sessions was largely around frustration and confusion with the platform. AERA surveyed conference participants post-meeting; however, this survey feedback was not available at the time of this publication.

The challenges faced by AERA are not unprecedented, and the scale of AERA's meeting far exceeds the ORATE conference researched in this study. However, numerous online conferences face organizational and logistical barriers that can impede positive experiences by participants. Global conferences in particular have the added burden of organizing across time zones (Pedaste & Kasemets, 2021). Furthermore, research on the satisfaction of learners in online settings during the COVID-19 pandemic has found general dissatisfaction related to virtual teaching methodologies (Torres Martin et al., 2021). When planning a virtual conference, conference organizers should utilize the recommendations provided in this study.

METHODOLOGY

To investigate the research questions, this descriptive study collected data via a feedback survey directly following the virtual ORATE conference, which occurred on February 19, 2021.

CONTEXT OF OUR VIRTUAL CONFERENCE

ORATE is an Oregon regional unit of the national organization, the Association of Teacher Educators (ATE). Once per year, ORATE hosts a conference of educators; researchers; graduate and undergraduate students; pre-service, in-service, and retired teachers; administrators; and policy makers in a collaborative learning environment that promotes deep thinking about critical issues in education today. The ORATE conference typically uses a modified version of the theme from the ATE annual meeting, which in 2021 was: *Advocating for Inclusiveness, Equity, and Excellence in Teacher Education*. The four strands designated for presentation proposals included: (a) Advocating for all people through a culture of inclusivity, (b) Advancing educator preparation throughout the next century, (c) Collaborating in support of equitable educational opportunities, and (d) Empowering educators toward excellence through research and practice. A request for proposals for the conference was distributed via email to a list serve that included past participants and current faculty members and graduate students at numerous regional universities, colleges, and community colleges. This request was also posted to the ORATE website in September 2020, with a December 1, 2020, deadline, and shared widely by ORATE Board members at their institutions. Proposals were blind peer reviewed via a Qualtrics

survey by the ORATE Board members, and acceptance notifications were sent in early December. Participants were asked to confirm their commitment to present by completing a short survey by mid-January 2021. This Google form asked presenters if they had a professional Zoom account with no restrictions on meeting time limits. The form then said:

If [you have a professional Zoom account], please provide a Zoom meeting link that may be used for your conference session. You may be assigned as the Zoom host of your presentation session. The link for your session will be provided to all participants in the conference program. More details will be provided to you prior to the conference. Tech tip: create a recurring Zoom meeting called "ORATE 2021" that you can use only for the conference that does not require a password. Thank you for your help in organizing this online conference!

Only six of the 42 accepted proposals (14%) did not have professional Zoom accounts. These six presenters were able to be partnered with a presenter who did have a professional account. There was only one breakout group in which neither presenter had a Zoom account, and this session was assigned a "Tech Helper" with a Zoom account who was able to start the session.

One of the early decisions made by the ORATE Board to increase access to the conference and acknowledge that many educator professional development funds had been cut due to the pandemic was to make the cost for attendance complimentary. ORATE posted the following statement on the call for proposals:

ORATE believes in the value of professional collaboration and learning that occurs at our annual Education conference. Due to the numerous challenges in the professional and personal lives of our members this year, the ORATE Board has decided to offer this year's conference free of charge to demonstrate our commitment to learning during times of crisis. We look forward to engaging with you on topics related to this year's theme.

The ORATE Board members were all higher education professional educators, and all of their professional development (PD) funds had been cut during the pandemic. It was also clear that many ORATE members, who include higher education and community college faculty and staff members, college students, and K-12 educators, would potentially struggle paying attendance fees without PD money during the pandemic. Thus, the ORATE Board made a commitment to both planning and implementing a cost-free conference, which was appreciated by participants, as indicated in the qualitative findings below.

ORATE Conference Format

The conference planning committee discussed various options for the conference schedule. By Spring 2021, many members of the committee had attended online conferences during COVID-19, so they were able to provide first-hand feedback on the pros and cons of certain planning decisions. In an effort to limit screen time, the planning committee kept presentation times under one hour and offered a minimum of 15-minute breaks between sessions to promote physical movement. Additionally, the conference ended by 2:30 p.m. because it occurred on a Friday, and in past face-to-face conferences, Friday afternoon sessions were not as well attended. The conference schedule is displayed in Table 1.

Table 1: ORATE 2021 Conference Schedule

Time Slot	Agenda Item
9 – 10 a.m.	Welcome
	Land Acknowledgement
	ORATE Award
	Keynote Address, Dr. Wayne Au, Insurgent Teacher Education: Organizing and Teaching Against Racism and White Supremacy
10 – 10:15 a.m.	Break
10:15 – 11 a.m.	Session 1
11 – 11:15 a.m.	Break
11:15 – 12 p.m.	Session 2
12 – 12:45 p.m.	Lunch on Your Own
12:45 – 1:30 p.m.	Poster Session
1:30 – 1:45 p.m.	Break
1:45 – 2:30 p.m.	Session 3

Prior to COVID-19, ORATE had offered individual paper presentations at their conferences; however, due to the online nature of the 2021 conference, they decided to make all presentations joint sessions, paired by similar themes. This choice guaranteed virtual participants for all presenters and also limited the screen time for participants. There were three session types, all of which were 45 minutes: 1) joint paper session with two paired paper presentations on similar themes; 2) roundtable session with three paired presentations on similar themes presenting in a casual format with time for discussion; and 3) poster session. In conferences pre-COVID, there was one large poster session that occurred directly after lunch, where poster presenters, who were mainly graduate students presenting research in progress, were situated around the edge of a cafeteria, so participants could browse the posters and discuss research with the presenters. However, the online format caused conference organizers to rethink the poster session. There were 42 graduate students from two universities who presented their Capstone research in progress, in addition to a few presenters who preferred the poster platform. Graduate students were asked to prepare one slide (see template provided to students in Figure 1), and they were provided the guidance that each student would have approximately five minutes to present their slide. These graduate students were grouped with similar topic themes, such as mindfulness, literacy strategies, and student engagement. Elementary and secondary candidates presented together if themes were related.

Figure 1
Graduate Student Poster Session Template

Title of Capstone Paper: A Really Great Informative Interesting Title ☺

Purpose of this Study	Your Name M.A.T. Candidate	Methodology
	Literature Review	
Significance of the Study		Preliminary Findings

Accommodations and Access

When planning the conference, the ORATE Board wanted to be sensitive to participants who might have lower levels of technological competence and confidence. Thus, in the survey provided to presenters, there was a question asking if the presenter desired a *Tech Helper* during their session. There was only one person who requested this help, likely due to conference registrants being educators who most likely had been teaching online for nearly one year. All participants were also invited to share any needed accommodations in their registration.

Additionally, the conference team provided two ASL interpreters for the Keynote speaker and for any participants who requested this accommodation in sessions throughout the day. The interpreters were consulted, and they recommended not using the Zoom spotlight feature during the presentations, which makes certain participants enlarged on the screen. They recommended instead that individual(s) requesting an ASL interpreter and the interpreters themselves be made co-hosts of the meeting. Being made co-hosts, they could take control over pinning the speakers during the presentations, which means the participant can pin a specific participant's video who is not the active speaker. This co-hosting feature also allowed participants to multi-pin, so both interpreters could be pinned, saving time finding the other interpreter in the midst of dozens of Zoom *heads.*

INSTRUMENT

The survey instrument was developed collaboratively among ORATE Board members, with iterative rounds of feedback and piloting for improvement (Dillman et al., 2009). Conference participants were asked to describe their experiences with the conference in a few different ways—for example, ranking their of favorite sessions, rating scale items of impact of the conference, comparing virtual conferences and in-person conferences, and rating open-ended qualitative items of participants' perceptions. There were nine survey items related to the conference session quality, such as *The content I learned at this conference will benefit my students*, and *The content I learned at this conference will improve my teaching practice*. These items included a Likert scale from 1 (strongly disagree) to 5 (strongly agree) and also included a "not applicable" choice. Participants were also asked four open-ended feedback questions related to their perceived benefits and challenges of the conference. Optional demographic items were included at the end of the survey. An email with a link to a Qualtrics survey was emailed to all registered participants after the final conference session.

PARTICIPANTS

A total of 51 participants completed the post-conference survey, which was a response rate of 46%, based on the 110 participants who attended the Keynote Speaker session at the beginning of the conference. Participants who chose to share their professional title self-identified in several ways, including higher education professor, instructor, researcher, or staff ($n = 15$); preservice teacher and/or graduate student ($n = 13$); in-service teacher ($n = 1$); K-12 administrator ($n = 2$); and retired, former, or other non-based educational professional ($n = 2$). Of participants who chose to provide demographic data, 12 self-identified as female and 12 self-identified as male. The majority of participants identified as White ($n = 34$). Additional racial demographics included: Hispanic/Latino (a) ($n = 3$), African Caribbean ($n = 1$), Black ($n = 1$), Asian American ($n = 1$), and Native Latin American, Quechua ($n = 1$).

When asked how much of the conference participants attended, 69% ($n = 35$) selected *All or almost all sessions*, with an additional 21% ($n = 10$) attending the morning sessions only. Participants also were asked, *What is the current format of the instruction at the school where you teach?* A majority of participants were fully online (59%, $n = 27$), with an additional 30% ($n = 14$) utilizing hybrid learning. It is interesting to note that in February 2021, none of the participants reported being fully in-person for instruction, which was typical of the pandemic landscape in Oregon. These numbers represented participants who worked in K-12, community college, and higher education contexts. See Figure 2.

Figure 2
Format of Instruction at Schools Where Participants Taught at Time of Conference Spring 2021
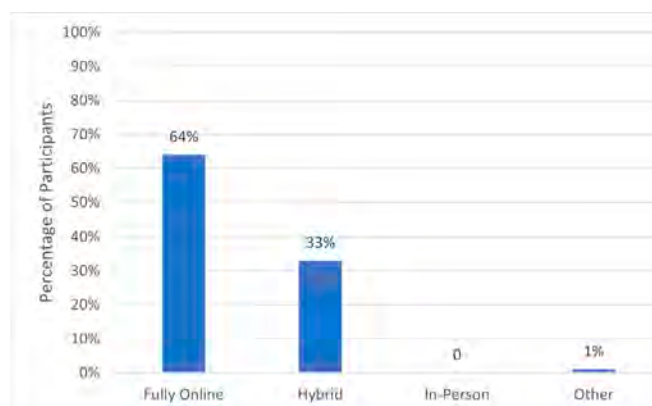
DATA ANALYSIS

The quantitative data were analyzed in Excel using descriptive statistics. The qualitative data were analyzed utilizing several methods of coding. The data were coded with in vivo coding (Creswell, 2009; Saldaña, 2009), which utilizes direct participant quotations to ensure the authenticity of participant voices. These quotations then were coded for repeating ideas, themes, and relationships (Miles et al., 2014). Finally, descriptive coding was used to assign a label to data with similar themes.

RESULTS

Both quantitative and qualitative data were analyzed to answer the following three research questions in their appropriate sections below: 1) What were the perceived learning outcomes of attending this virtual education conference, both for teacher practitioners and for their P-20+ students? 2) What were the perceived benefits of an online conference format? 3) What were the perceived challenges of an online conference format?

Perceived Learning Outcomes of Conference for Teacher Practitioners and Students

To understand the perceived learning outcomes of conference attendees and their associated students, a few different techniques were utilized. First, participants were asked to rank their top three favorite sessions out of the 20 sessions offered to understand better which sessions and session topics likely had an impact on the learning of attendees. Second, conference participants were asked to complete a series of seven rating-scale items about their experiences at the conference

Rankings of Favorite Sessions

Participants described a wide range of different sessions they found to be interesting and impactful. While proposals had to align with a conference theme, it is important to note there was still a wide range of topics in the sessions provided. One participant appreciated this diversity, stating: "I really enjoyed the range of presentations that focused on anti-racism, multiculturalism, and cultural responsiveness." In line with this finding, a total of 42 participants (82%) selected the Keynote Speaker, Wayne Au, as one of their favorite sessions. Wayne Au is a Professor in the School of Educational Studies and Interim Dean of Diversity and Equity at the University of Washington Bothell, and he is an editor for the social justice teaching magazine, *Rethinking Schools.* Au's talk was titled *Insurgent Teacher Education: Organizing and Teaching Against Racism and White Supremacy.* Au focused on the sociopolitical climate, including the Black Lives Matter movement, and the impacts on students, teachers, and schools. He called on the education community to view teaching as activism and to contribute to positive change in our schools, even when school districts may not support the cause.

Other favorite sessions included a discussion of first-generation college student experiences, a session on social-emotional learning and anti-racist teaching, a session on building cultural competencies, and one on learning to see exclusion as whiteness. Survey participants also highlighted the poster session as one of their top three favorite sessions. The poster sessions, which were largely led by graduate students, covered a broad range of topics, including mindfulness, differentiation, math teaching and learning, student motivation, and educational equity. One participant shared positive feedback about these poster sessions: "The student poster sessions were very well done and I'll encourage my own students to present some of their work." In the future, ORATE plans to continue to invite faculty members to collaborate with students in this area and encourage students to share their research. From their descriptions and rankings, it is clear session attendees found a variety of sessions to be informative and likely impactful on their teaching.

Impacts and Quality of the Conference

To quantify this impact on their teaching and students, however, attendees were also asked to provide ratings about the impact of the conference, which were overarchingly very positive (see Table 2). On a rating scale of 1 (strongly disagree) to 5 (strongly agree), mean ratings ranged from 4.44 for *The content learned in this conference will improve my research practice* to 4.86 for *The presenters were prepared*. Because these rating scale items were ordinal, percent agree and disagree were also calculated. Upwards of 90% of participants agreed that the information learned will benefit their students, and the content will improve both their research and teaching practice. In addition, most respondents were able to attend their preferred choice in sessions. Finally, 98% of participants thought the sessions were high-quality, and 90% want to participate in this conference again next year.

When asked for specific content, practices, or research participants plan to use in the future, the most frequently mentioned term was insurgent pedagogy, which was part of the keynote address. For instance, one participant stated: "I

will include ideas on insurgent teacher education in my multicultural education course." Further, numerous participants mentioned learning about culturally responsive or anti-racist teaching. Finally, a presentation on equitable grading was mentioned as an applicable takeaway for several participants, with one participant commenting: "I thought [the] talk about making changes to grading practices was excellent! I'm definitely going to look more into creative ways to increase equity in grading." The focus on equity was woven through the key takeaways for participants.

Perceived Benefits of Virtual Conferences

To answer our second research question, conference participants were first presented with two additional rating scale items about their enjoyment in attending virtual conferences, and how this enjoyment compared to their enjoyment of attending in-person conferences (see Table 3). Overall, more than half (61%) reported enjoying attending virtual conferences, which speaks to the benefits of virtual conferences. However, participants described enjoying in-person conferences more than virtual conferences. A paired samples *t*-test compared the results between the two items,

Table 2 Participant Perceptions of Impact of Conference via Rating Scale Survey Items

Survey Item	Mean	SD	Percent Disagree	Percent Agree
The content I learned at this conference will benefit my students.	4.53	0.65	2 (n = 1)	96 (n = 43)
The content learned in this conference will improve my research practice.	4.44	0.67	0 (n = 0)	90 (n = 43)
I was able to attend my top choice sessions	4.67	0.70	2 (n = 1)	96 (n = 49)
The content I learned at this conference will improve my teaching practice.	4.51	0.61	0 (n = 0)	94 (n = 44)
The presenters were prepared.	4.86	0.49	2 (n = 1)	98 (n = 50)
The sessions were of high quality.	4.76	0.55	2 (n = 1)	98 (n = 50)
I would like to participate in this conference next year.	4.68	0.65	0 (n = 0)	90 (n = 45)

Notes. Strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), strongly agree (5); *N* = 51.

Table 3 Participant Perceptions of Virtual vs. In-Person Conferences via Rating Scale Survey Items

Survey Item	Mean	SD	% Disagree	% Agree
I enjoy attending virtual conferences.	3.65	1.20	20 (n = 10)	61 (n = 31)
I enjoy attending in-person conferences.	4.18*	0.98	8 (n = 4)	82 (n = 40)

Notes. Strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), strongly agree (5); * $p < .05$. $N = 51$.

I enjoy attending virtual conferences and *I enjoy attending in-person conferences*, and in-person conferences were statistically significantly higher ($p = .043$). While 82% of participants described enjoying in-person conferences, only 61% of participants described enjoying virtual conferences. This finding speaks to the challenges of an online conference format, which will be unpacked in the last section. It is interesting to consider other reasons and perceived benefits for participants attending conferences besides enjoyment, including scholarship, networking, and tenure-related decisions. Many graduate student attendees identified course requirements as the reason for attending.

To further investigate this research question, participants were also asked, *In your view, what were the benefits of the virtual format of this year's conference?* Several themes emerged in the qualitative data (see Table 4). Key words that surfaced repeatedly in the data were *convenient*, *flexible*, and *accessible*. Many participants were able to attend the virtual conference even if they lived far away, were experiencing cold or icy winter weather, were immersed in busy lives, or were feeling ill. The most frequently mentioned benefits were related to adaptability and accessibility. Participants appreciated the flexibility of the online format, allowing them to squeeze conferencing into their busy schedules. Participants also appreciated the lack of travel and a lack of the need for childcare. Geographic accessibility due to the online platform was mentioned by numerous participants. For instance, one stated, "It was nice to have presenters from all over the region and country and even from Canada. It was also nice that people didn't have to travel with the winter weather this year." The conference occurred in February 2021,

which is frequently a time of challenging winter weather in the Northwest. There was an ice storm in Portland, Oregon, the week of the conference, and many people lost power. However, power was restored prior to the conference day, thankfully. Additionally, several participants mentioned the benefit of a cost-free conference due to the lack of professional development money and health concerns related to the pandemic.

PERCEIVED CHALLENGES OF VIRTUAL CONFERENCES

To answer our third research question, participants were asked, In your view, what were the challenges of an online conference format? Qualitative responses were coded into five main themes (see Table 5). The most frequently mentioned challenge was a lack of personal connections and interaction with others. Additionally, technology challenges impeded professional learning, including poor audio and internet connectivity. Despite the conference planning goal of reducing Zoom fatigue with shorter sessions, participants mentioned both Zoom fatigue and brief session length as challenges to the online format.

Table 4 Participant Identified Benefits of Virtual
Conference Format

Benefits	Participant Feedback
Adaptable for Busy Schedules	The virtual format made the conference more accessible to my schedule. If it was in person this year, I would have had a hard time making it fit with my schedule.
	It's nice to be able to have your screen off so you feel more autonomy and you can multi-task if needed.
	Not having to travel and arrange for childcare. It was also easy to switch between sessions.
Geographically Accessible	People able to attend from a wide range of locations
	Ability to learn from speakers on the East Coast who otherwise may not have attended.
	It was easy to pay attention to the speakers while moving around.
	We saved time but not driving to a venue.
	It was nice to have presenters from all over the region and country and even from Canada. It was also nice that people didn't have to travel with the winter weather this year.
	I was able to Zoom in from home and that saved me at least 3 hours of driving. I would prefer virtual ORATE conference at this time of year.
	No need to fight traffic.
Health Benefits	I didn't get or spread Covid.
	It kept everyone safe.
Learning Experience	The incorporation of research and theory into the online setting.
	I really liked the virtual nature of the Posters because rather than the students standing by their work and explaining it 2-3 times (if they get people stopping and engaging) they each had their 5-7 minutes in the sun and I felt were a great audience for each other
	I am a research nerd and appreciated the research presentations.
Cost	The fact that the conference was free was appreciated because we have no PD money because of the pandemic.
	I really appreciated that it was provided for no cost. Quality speakers and presenters, as always.

DISCUSSION

Based on both the quantitative and qualitative data from ORATE conference participants, the virtual conference format seemed to be a positive professional learning experience, with 90% of survey respondents having the desire to attend the conference next year. Additionally, the conference appeared to have potential positive impacts on both future teaching practice and research. A total of 96% of survey respondents agreed that the content learned at the conference will benefit their students, and 90% agreed that the content learned at the conference will improve their research practice. When asked for specific examples of learned content, participants highlighted sessions focused on equity related to teaching, assessment, or curriculum. This finding aligns with the conference theme, which was taken from the national ATE organization. The focus on equity in education is a critical issue at conferences across the country, including AERA's 2022 theme, *Cultivating Equitable Education Systems for the 21st Century.*

The ORATE 2021 conference theme, *Advocating for Inclusiveness, Equity, and Excellence in Teacher Education*, felt relevant and meaningful. Additionally, the Keynote address by Dr. Wayne Au called teachers to see teaching as activism, particularly in the current age of the Black Lives Matter movement. One participant said of this talk: "Personally, I like keynotes that push boundaries a little and make people a bit uneasy...Geneva [Gay] and Wayne [Au] have done that, in different ways, the last two years. I think it serves the profession well to discuss uncomfortable and/or inconvenient topics." The call to action posed by Dr. Au seemed to resonate with many of the participants. One participant said, "Dr. Au's keynote really is making me re-think

Table 5 Participant Identified Challenges of Virtual Conference Format

Challenges	Participant Feedback
Lack of Personal Connections	You miss the opportunity to network with others. I long for contact and conversation with my colleagues as we all do. There was a lot of interaction in the sessions, but I couldn't interact with some of my colleagues that I haven't seen for a year or so. It's harder to connect personally with other professionals and it's hard to keep conversations going since the session ends and the Zoom room closes. Missed having some networking time before the conference
Face-to-Face Interactions	Body language communication and interactive engagement with the audience is less apparent. Ability to see audience, read facial expressions, have spontaneous conversations.
Technology challenges	Tech difficulties Technical problems, occasional poor audio Some people had trouble with internet connections or losing power because of the ice storm. Technical difficulty with closed captioning
Zoom Fatigue	Staying engaged on Zoom all day. Zoom burnout Harder to stay engaged Fatigue and feeling disconnected from participants.
Short Sessions	Not enough time for speakers Were the sessions shorter?

my perspective and lens with how I seek to serve students' needs." Another said, "I'm interested to learn more about Dr. Au's "pedagogy of insurgency" and I have ordered his book." Participants voiced a motivation to continue their learning post-conference. Prior research on the impact of conferences found that participant learning outcomes and satisfaction were enhanced when participants were engaged in knowledge sharing and reflective conversations (Ravn & Elsborg, 2011). While ORATE did provide a follow-up question and answer session for graduate students with the keynote speaker, perhaps integrating time during or after the session for all participants to engage in a more dialogical learning experience could have further deepened learning outcomes related to the keynote themes. However, the positive and prevalent feedback related to this session highlights its impact across

participant experiences.

Finally, there was a consistency of appreciation from participants that the conference occurred at all. One stated, "Glad the conference happened despite the challenging times." Another wrote, "Thank you! The amount of work that goes into pulling something like this off is extraordinary and very appreciated!" Another participant appreciated the email communication prior to the conference: "[The ORATE Board] did a phenomenal job on the logistics and communication for the conference! Stellar work! Thank you!" The importance of communicating clearly and consistently with virtual conference participants was also found in prior research on virtual conferences (i.e., Reshef et al., 2020). Additionally, perhaps the size and scope of the 2021 ORATE conference, in comparison to the 2021 AERA annual meeting, allowed for organizational and

technological opportunities that were unavailable for a global conference, such as AERA.

RECOMMENDATIONS

The prevalence of online learning platforms since the onset of the pandemic has inspired much research on how to improve efficacy of virtual learning. Fulcher et al. (2020) recommended five factors that can improve virtual meetings: "clear identification of goals; deliberate design of structured interactions; use of accessible, intuitive, and widely available technologies; pre-event training with platform tools; post-meeting assessment of outcomes" (p. 949). Our data echoed these criteria, but we call for a consideration of the global context in which the conference occurs. Based on participant feedback from the ORATE conference, we offer three key recommendations for facilitating an effective online conference.

1. *Organization is essential.* The ORATE Board worked collaboratively to consider the logistics of each step in the process prior to communicating with participants. Communication was clear, consistently on the same platform (email), and direct.

2. *Utilize technological platforms that are familiar to participants and presenters.* The choice for the conference to be conducted on Zoom was critical to its success, largely due to its familiarity among participants. While there were still technological challenges on an individual user basis, the overall platform was managed seamlessly. This platform was accessible and navigable for participants, and they were able to attend easily from any geographic location and any device (i.e., smart phone, computer, tablet).

3. *Respond to the needs of participants in the sociopolitical context in which the conference occurs.* This recommendation entails assessing and responding to the needs of participants, offering content sessions that respond to the interests of participants, and being culturally responsive in the leadership and management of the conference. The particularly unique context of the COVID-19 pandemic, in addition to social movements such as Black Lives Matter, motivated the ORATE leadership to be flexible,

communicative, and focused on equity and inclusion in the theme, keynote choice, and sessions. No matter the context of the conference, we recommend a critically reflective lens when planning and facilitating.

LIMITATIONS

As with all research, this study was not without limitations. This was a study of one small, virtual education conference held during February 2021, in the Northwest. It is bounded by the particular location, the size of the conference, the topic and theme of the conference, and the timing of the conference during the COVID-19 pandemic. Participants were likely experiencing increased stress, anxiety, computer screen or Zoom fatigue, and demands on their time due to this pandemic that may not occur during a virtual conference held outside the constraints of the pandemic when some attendees had to monitor their own children's education during conference hours. Numerous studies have reported such negative impacts on faculty members, similar to these teacher educators, including declines in productivity, poorer mental health, and increased stress (Chesley, 2021; Flaherty, 2020; Tugend, 2020). This study does not purport generalizability; however, it offers suggestions for continued research of this format outside of these COVID-19 pandemic constraints as a potential method of value for providing professional learning experiences without the cost, logistics, and travel of an in-person conference.

CONCLUSION

This study found largely positive perceived impacts for attendees and their students. The success of the 2021 ORATE virtual conference was potentially due to the one year of online teaching and learning that had occurred prior to February 2021. The February 2020 ORATE Conference was likely one of the last in-person professional development experiences many of the participants engaged with prior to transitioning to online learning due to the COVID-19 pandemic. One participant from 2021 stated, "The virtual format was smooth because people have been online for a year already. It is starting to feel normal to learn on these platforms. It makes me wonder what future conferences will look like." Despite challenges related to personal interactions, technology challenges, and Zoom fatigue, the benefits appeared to

outweigh the negatives. One participant suggested: "It may be a good idea to have a hybrid conference in the future because some of us don't like driving." Whether the benefits include reducing the carbon footprint (Houghton et al., 2020; Pedaste & Kasemets, 2021), increased participant attendance (Banerjee & Brassil, 2020), or simply the convenience mentioned by numerous participants in our study, online professional development experiences may remain an option for future learning in higher education and community colleges. While there were significantly more participants ($p = .043$) who said they enjoy attending in person conferences (82%) than attending online conferences (61%), the majority of participants reported enjoyment in attending virtual conferences. Perhaps the lessons learned from the hours of online teaching and learning will lead to a refinement of this context for the future of conferencing. When we are teaching again in person, we will be more open to the occasional online conference out of nostalgia for those pandemic days when we did not have to leave the house.

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