

Introduction to the Special Issue: Highlighting AERA's Online Teaching and Learning SIG 2021

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The American Educational Research Association (AERA) is a professional organization representing researchers in the United States and globally in their efforts to improve education by encouraging academic inquiry and implementing of educational research results. Since 1916, AERA has connected scholars worldwide from approximately 96 countries. Each year, around 14,000 attendees engage in scholarly discussions in more than 2,600 sessions. In 2021, the annual meeting theme was “Accepting Educational Responsibility,” reflecting the interdisciplinary background of its 25,000 members. During the 2021 meeting, AERA members adapted to a virtual format after the cancellation of the 2020 annual meeting due to the COVID-19 pandemic.

As part of AERA, the Online Teaching and Learning (OTL) Special Interest Group (SIG) leads the discussion on the latest research, achievements, and trends in higher education, K-12, and workplace online teaching and learning. In 2021, the OTL–SIG sponsored 17 sessions resulting in a stimulating and multifaceted conversation that translated systematic research into practical recommendations for online learning practices. For more information about the OTL SIG, please visit their website <https://www.aera.net/SIG035/Online-Teaching-and-Learning-SIG-35>. The OTL–SIG and the Online Learning Consortium (OLC) have a long-lasting partnership to communicate the latest research to practitioners. Since 2016, the OLC has sponsored a special issue of *Online Learning* journal (OLJ) with research papers presented by members of OTL–SIG at the annual meeting.

The ten research articles in this year’s issue showcased research devoted to advancing high-quality online learning around four themes: learner engagement, the use synchronous video-based communication to support teaching, instructors’ perspectives and experiences, and pedagogical recommendations.

The first category of studies centered on student engagement. In “What We Learned When We Compared Discussion Posts from One MOOC Hosted on Two Platforms,” Rebecca M. Quintana, Juan D. Pinto, and Yuanru Tan detailed how different discussion board structures

in Massive Open Online Course (MOOC) effected student engagement in discussion boards through content analysis of 194 students' posts. The authors found that learners' answers to the proposed prompts were more assertive when MOOC platforms forced them to respond to a discussion prompt before seeing peers' comments. Conversely, when peer comments were open to view prior to posting, learners engaged in reflective and persuasive discourse without answering the discussion prompts. Their study provides practical recommendations for MOOC developers and instructional designers.

In "A Case Study of Learners' Engagement in Mobile Learning Applications," Chenxi Liu and OTL SIG chair Ana-Paula Correia used a case-study design to investigate the top six mobile learning applications from a customer engagement perspective. Using inductive coding, the authors analyzed 2,064 customers' reviews posted in Google Play and Apple Stores to identify the factors impacting learners' engagement with mobile learning applications. Their results show that usability, course availability, learning features (e.g., note-taking), interpersonal interaction, and incentives for completion were critical factors to maintain student engagement. Liu and Correia's study was an innovative interdisciplinary integration of education and marketing perspectives to understand learner engagement. Readers will find practical recommendations for developers of mobile learning applications, students, and instructors alike.

The final study in the learner engagement strand, "Learning presence and the reconceptualization of language and literacy teachers' online professional development," was by Faridah Pawan, Rajagopal Sankaranarayanan, Rodney Myers, and Dorcas Miao. The mixed methods study examined how online instructors' learning engagement shapes their teaching practices. The authors found that instructors enrolled in an online professional development program to meet "professionalization and professionalism" goals while being online learners. Using content analysis of online discussion boards, survey responses, and interviews of 17 instructors, they found that this online professional learning allowed instructors to obtain a credential and test their ideas about teaching online while being learners. Pawan and colleagues' study informs those interested in online instructors' professional development and serves instructional designers, administrators, and instructors alike.

Two of our studies addressed synchronous video-based communication. First, Patrick Lowenthal, Richard West, Leanna Archambault, Jered Borup, and Eric Belt examined how the COVID-19 pandemic changed "Faculty Perceptions of Using Synchronous Video-based Communication Technology." The study used an explanatory two-phased, sequential, mixed-methods and included 336 survey responses and 18 interviews. The authors contended that most traditional online learning relied on asynchronous text-based communication, yet synchronous video-based communication became more widely used during the COVID-19 pandemic. The researchers found that video-based communication had several challenges like fatigue and distraction despite instructors feeling satisfied with using it for teaching and non-teaching work alike due to its flexibility. The authors conclude that video-based communication is likely to remain as a tool in online teaching and learning. Therefore, they invite the educational technology community to guide faculty on how to use it strategically.

Like Lowenthal and colleagues, Cynthia Carson and Jeffrey Chopin also focused on the potential of synchronous video communication to support teaching. They studied the implementation of virtual coaches in "Coaching from a Distance: Exploring Video-based Online Coaching." Their NSF-funded study explores the trajectory of nine math coaches who use video-

based coaching to support rural teachers. Their analysis of pre- and post- intervention lesson plans and interviews showed that video-based online coaching allowed teachers and coaches to establish a trusting and productive collaboration despite the lack of in-person interaction. Professional development researchers and math coaches will find Carson and Chopin's work gives insightful examples of what math coaches *do* and *why* they do it during coaching cycles. The authors conclude that video-based coaching efficient tool to connect geographically distant teachers and experts, and therefore, it merits scalation to reach a larger audience.

The third category of this special issue pivots to faculty perspectives and experiences in online environments. First, Katrina Borowiec, Deoksoon Kim, Lizhou (Jo) Wang, Julie Kim, and Stanton Wortham's study "Supporting Holistic Student Development Through Online Community Building" won the 2021 Best Research Paper Award of the OTL SIG. Using an exploratory sequential mixed method study, answered the questions *How did faculty foster a sense of community online to support students' holistic well-being during the COVID pandemic? What strategies can faculty use to create community and foster well-being in online courses?* Their rich data that included faculty interviews (n = 37), course evaluations (n = 13), and survey responses (n = 347) showed that successful strategies focused on purposeful course design, establishing expectations, and fostering a trustworthy learning environment. Borowiec and colleagues found that instructors used many techniques closely tied to teaching and social presence to sustain a holistic online community during the COVID-19 pandemic. Their work is valuable to understand how faculty from different disciplines experienced remote teaching.

Next, in "Teaching Presence in Online Courses: Similar Perceptions but Different Experiences from Multiple Instructor Perspectives," Murat Turk, Aly Ceyhum Muftuoglu, and Sinem Toraman used a qualitative-multiple case study to understand online instructors' perceptions and experiences while teaching. They interviewed nine online instructors and found that pre-course design is a critical factor of online instructors' overall experiences of feeling present while teaching. This article will be particularly useful for those investigating the nuances between teaching and instructor presence in online learning.

In the final category, three studies provided pedagogical recommendations to enhance online teaching and learning. First, the study "Exploring Online Pedagogical Practices for Enhancing Transfer of Learning in Higher Education" by Tamara Galoyan, Kristen Betts, Brian Delaney, and Mariette Fourie built on their previous work on the Integrative Transfer of Learning (ITL) Model to explore the perceptions of online graduate students about the transfer of learning and draw pedagogical recommendations for practitioners. Employing an exploratory sequential mixed methods design, the interview results of seven graduate students confirmed that the ITL model reflected their conceptualization of transfer of learning. Then, drawing on survey data (n = 68), the authors provide valuable recommendations on pedagogical practices that enhance the transfer of learning that can inform instructors' decisions. Galoyan and colleagues' work is a timely approach to address how online learning fosters transferring skills and experiences from the classroom to the workplace.

In "An Exploratory Examination of Student-Led, Asynchronous Collaborative Online Discussions in Fostering Higher Order Cognitive Skills and Ethical Leadership Learning," Graziella Pagliarulo McCarron, Larisa Olesova, and Brianna Calkins analyzed online discussion boards at the beginning, middle, and end of an Ethics and Leadership class. Their three-point analysis (n = 35) showed that students achieved cognitive and ethical leadership skills, yet

demonstrations of their skills decreased by the end of the course. The authors contend that factors like video conference fatigue and end-of-term exhaustion decreased engagement in discussions. Their work provides readers with a holistic view of how online learning can support leadership training.

Additionally, Yishi Long and Adrie Koehler focused on pedagogical recommendations for online discussion facilitation in “Student Participation and Interaction in Online Case-Based Discussions: Comparing Expert and Novice Facilitation.” Through mixed-method social network analysis, Long and Koehler described how expert instructors who initiated online discussions result in more active student interactions. Although the authors observed that both novice and expert instructors used similar facilitation strategies like social congruence, cognitive congruence, and content expertise, they found that novice instructors varied their approaches less. Their fresh look to discussion forums provides pragmatic recommendations to instructors and professional development programs for online teaching and learning.

We would like to extend our special thanks to OJL editor-in-chief Peter Shea, OJL managing editor and OTL–SIG program chair Mary Rice, and OTL–SIG chair Ana-Paula Correia. We also sincerely appreciate our authors’ effort in making this special issue possible.

Finally, this year’s special OLC/SIG–OTL issue mourns the loss of Dr. Karen Swan, who was an impressive scholar and a founding Executive Board member of the OJL and the OLC, and an editor for this special issue. She passed away peacefully on September 5, 2021, amid the preparations for the final version of this special issue. Dr. Swan’s efforts to think constructively and collaboratively about online learning have shaped the online learning field. Likewise, her exemplary mentoring touched the hearts of countless students throughout her career. We are deeply humbled to have worked with Dr. Swan. Therefore, this special issue honors her lifelong career.

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