SPECIAL EDITION: POST-COVID ONLINE TEACHING AND LEARNING RESEARCH OUTCOMES

EDITORIAL

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Digital and online learning spaces have fought many hard won battles over the last few decades, with narratives focused on issues of quality of educational outcomes, legitimacy of the modality alongside accreditation concerns, interactivity and engagement with students and faculty alike, privacy and academic integrity, and so many others. From the the early 2000's until present day, those issues have been seemingly on an endless loop of review, assess, cultivate best practices, and implement on a campus-by-campus; a program-by-program; or sometimes, even a course-by-course basis of implementations. Even the best designed online learning courses, programs, and initiatives from well-renowned faculty and campuses were at times overlooked prior to 2020 due to a perception on the part of some of academia about the lessened value and/or student learning outcomes associated with the online learning modality. For years, many researchers, faculty, and administrators have demonstrated the excellent learning outcomes as well as student satisfaction rates aligned with well-designed online learning courses and programs.

Yet, the ultimate turn toward the global adoption of online learning was not attributable to those outcomes, but instead, to what was to become the most unexpected impact on digital and online learning to date, perhaps since the late 1990's and early 2000's rollout of the Learning Management Systems to many campuses of Higher Education. This worldwide adoption of online learning was not attributable to the invention of a new form of instructional technology for student engagement as many might have predicted, nor was it research that showed one particular pedagogical technique online exceeded others. Rather, the greatest impact on the increase in adoption fell squarely in March of 2020 with the beginning stages of COVID-19 in and around the world, and the subsequent swap to Emergency Remote Teaching (ERT) for most higher education campuses across the world. University Business (Ward, 2022) indicated that over 220 million students were impacted worldwide the COVID-19 pandemic in April of 2020. From this finding, UB noted that a surge in interest in online learning for continuity of instruction occurred alongside a doubling of the adoption of technology platforms by campuses, in order to accommodate the demands for student-faculty interactivity and engagement, as well as other teaching and learning needs in the online learning environment. UB also noted that the perception by students of feeling a "part of the classroom community" was noted in 85% of those reporting, alongside 84% of students indicating that remote learning was effective in their campus environments during the COVID-19 pandemic timeframe. In the Optimizing High-Quality Digital Learning Experiences Playbook, Gunder et al. (2021) suggest that the drastic, required changes that came about with the onset of COVID-19 forced faculty to focus on more effective online courses, with an enhanced focused on building digital learning environments accessible to all students.

During the initial onset of COVID-19 and the turn to ERT across the Higher Education campuses, we saw innovative, fast-paced leaders such as Stanford University the way in initial ERT designs, such as Stanford's Teach Anywhere website (Anderson & Berhtram, 2022). Quickly after, we began seeing organized groups of Instructional Designers, Faculty, Provosts, and Digital and Online Learning Administrators collaborating to develop a means to transform their face-to-face institutional educational offerings into fully online offerings-some for over a full year. Campuses best suited for the fast-pasted swap to ERT were those with strong online learning programs ahead of COVID-19, including those with such features as consistent criteria for quality; faculty training and support programs; embedded trainings, tools, and support for enhancing interactivity and student engagement; as well as forms of standardization on strong pedagogically-minded online course designs. For example, at my own mid-sized Liberal Arts teaching institution, we were readily able to move thousands of on-ground class sections into online through all of these elements being in place prior to COVID-19 onset, as well as having a well structured Academic Continuity plan for moving to the online space, in the event of an unexpected, short- or long-term emergency. COVID-19 became that emergency, and we saw at my own institution,over 500 faculty move online, including those who had never previously taught through that methodology. With ADA and WCAG-developed online course templates, mandatory faculty training for teaching online that included a focus on digital accessibility and student engagement (amongst 5 core areas); an incredible team of 5 personnel providing round-the-clock support during the initial ERT phase; and scaling up of already-present tools, trainings, and services, our campus was one of the single most successful ERT transitions I have yet to come across in the 3 years since the onset of COVID-19. With significant acknowledgement to my own staff for their knowledge, perseverance, hard work-and at times, tears-that got us through that ERT period to uplift all classes, faculty, and also staff into the online space within our self-hosted LMS, as well as a heavy nod at the March 2020 roll-out of the Faculty Course Mentors program, allowing for peer–to-peer faculty support and training to facilitate inter- and intradepartmental training and support campus-wide. Similar peer-to-peer, faculty-led training and support models were seen with Stanford's CDA+ program (Anderson & Berhtram, 2022), where on-going support of peers within academic disciplines within the digital learning spaces filled in gaps in instructional technology and design knowledge identified for many faculty during the ERT processes (Gunder et al., 2021).

The influence of an influx of instructional technologies that flooded the market of Higher Education arenas during 2020-2022 increased interest as well as research into the use of these instructional technology tools for improvement of student learning outcomes, interactivity, and community building within the online learning as well as hybrid spaces. A 2023 article (Lynch, 2023) listed the top five transformative trends as it relates to online learning technologies, including: active learning, mobile learning, collaborative learning, adaptive learning, and gamification, each of which has both a pedagogical underpinning as well as an array of instructional and interactive technology tools on the marketplace today, serving students across the disciplines to varying degrees of success. Interestingly, many of these trends noted by Lynch are reappearing over a decade after their first steps onto the online learning space, most likely with renewed or even first-time interest from faculty without previous experience in these tools and pedagogical techniques, ahead of COVID. For example, in a recent Educause Review article (Baiyan, Denoyelles, Brown, & Seilhamer, 2023), the authors revisited mobile learning research, in fact, from 2012-2016, now over a decade past since the original research was completed. Exploring and promoting research within these areas that both faculty and students find pivotal to their learning experiences has been a motivator for online and digital learning professional alike, with the consistent goals of increasing access to education for those who needed, wanted, and benefited from the digital learning modality.

With the space of Higher Education transformed post-COVID into a venue in which students are readily seeking online learning opportunities and are able to compare the best among the best, it is even more critical for campus administrators, department chairs, instructional design and online learning teams, and faculty alike to remain up-to-date on best practices for course design, support, and access. In an in-depth series of interviews with students across higher education institutions, Latulippe, O'Sullivan, Williams, and Holiday (2022) found a total of 3 critical, recurring themes most desired by students enrolled in higher education. The themes that emerged include:

- Students want to be recognized as individuals and appreciated in the classroom-students need to belong and want to know faculty are working to make them feel like they belong in their classroom
- Students want real life in the classroom-with real world examples
- Students want to be treated with respect

> and trust-personalization in interactions and even the tone on syllabi impacted this sense of respect and personalization for students.

These outcomes guide us to areas warranting additional research within the field of online learning. This Special Issue focuses on research conducted globally during and in some cases, because of the onset of the COVID-19 pandemic, in which we see the adoption of many techniques as well as instructional technologies new to institutions, to students, as well as to faculty. With the robust research methodologies employed by the authors within this Special Issue, as well as a strong diversity of topics, we found that the Special Issue provided outcomes that fall into organically organized collections of areas of research. Our first section within this Special Issues focuses on Foundations in Digital Learning Interactivity, including in-depth analysis of language learning techniques in the online learning space with Adelson and Simonnet Keen, along with deep dive analyses into use-cases and research outcomes from instructional technology tools such as FlipGrid (Bedeker) and Duolingo (Neuschafer). This section concludes with models of pedagogical approach, such as student self-grading models with Kong, and recommendation on the critical nature of interactivity for student performance in online learning classes with Thompson.

Even during the pandemic, on-going research into best practices for online course designs suited to enhance student engagement, and perhaps most importantly, student learning outcomes and success continued onward within our field of digital learning. Gunder et al. (2021) highlighted in their Playbook for faculty the integral nature of online courses designed with equity principles at their core, along with a strong Universal Design for Learning (UDL) underpinning in all elements of the designs as well as interactions, We see those critical junctures of research emerge within our second section of our Special Issue, the Programmatic & Course Design Findings From Digital Teaching in the Pandemic. With articles examining the strengths of course design modalities such as HyFlex (Cheng), Flipped (Seifert), these authors share outcomes post-COVID showcasing elements where student learning outcomes showed the greatest promise within modalities, alongside particular pedagogical designs. We close that section with important highlights on designing for all learners, with research from Ramsey-Soroghaye, Emejuru, Solomon-Zacchaeus, and Abur identifying crucial improvements needed for student success relative to faculty training on tools and techniques, inadequate services and infrastructure, and inequity in access to services due to socioeconomic differences amongst learners. Ramsey-Soroghaye et al.'s findings are further supported with the outcomes from Legg-Jack and Ndebele on the hurdles of inconsistent access to reliable internet or tools deemed necessary for success in the online learning environment. This section highlights the critical nature of assessing consistency in training on best practices for faculty; evaluation of student resources required versus available to students for success within the online learning space; as well as and in relation to design for success, incorporating UDL conceptually to large-scale programs at institutions of Higher Education across the globe, with special mind to areas where individual geographic locations around the world may lack resources or consistent access to high-speed connectivity.

Our third and final section for our Special Issue, Minding the Gaps in Digital Learning & Student Equity, offers important next steps with the recommendations and outcomes for online learning faculty, administrators, and practitioners around the globe by honing in on gaps in the literature that need to be filled. As this Special Issue readily incorporates research conducted by our authors both within the United States as well as worldwide, the phrase "Mind the Gap" may not be as well known outside of Europe, so I'll briefly define that here. As noted by Wikipedia, the phrase "Mind the Gap" originated in the railway system of London, England in the 1960's, and specifically references the physical gap that exists between the railcars entrance door and the platform on which the passengers stand. In this Special Issue, we are looking to "Mind the Gap" in our online learning literature by examining where those gaps exist, and offering the readers here opportunities to dig deeper into the outcomes from our authors who have explored areas of research in online learning where more work is yet to be done. I believe you will find these outcomes immediately applicable within your own institutions, and perhaps walk away from this final section with some ideas that have yet to be placed on the table for consideration. By investigating demographic models alongside various online course modalities and learning preferences, Nassr et al. offer important insight into student learning intent alongside modality that is a new take on investigation within this space. With taking both qualitative as well as quantitative approaches to review perceptions of graduate online learning students, both the article by Swartzelder, Murphy, and Myers as well as the article by Roseland and Saeger offer distinctions from most published literature focused on the needs of online learning students where groups of undergraduate as well as graduates are oftentimes lumped together without consideration for the unique demands expected on adult learners pursuing tertiary degrees. Outcomes relating to community building as well as learner preferences will be useful to the readers here.

The final section further showcases gaps in literature with Mallory, Long, Foster, Marchetti, and Bryant's article examining Deaf and Hard of Hearing Online Learning students and the inequities both pre- and during COVID-19 experienced by the D/HH students, including additional costs required of these students for equitable access to learning materials. Our Special Issue concludes with the study by Wang, Cardullo, Burton, Salisbury-Glennon, and Serafini, with an investigation into perceived online teaching self-efficacy of K12 teachers, helpfully expanding our knowledge base within the K12 learning environment where insufficient data has been collected to date.

CONCLUSION

There are many areas of research within online learning that have been well-supported time and time again over the last twenty plus years, which are indicative of best practices for supporting both faculty as well as students in the online learning space. We know from many trials and tribulations-as well as the assessment of aptly designed as well as ERT online classes during the COVID-19 pandemic-that these same techniques, tools, and designs show strong positive correlations with improved student learning outcomes and satisfaction. The articles selected for inclusion within our Special Issue further our body of knowledge and deepen our critical understanding of serving all students across the globe; supporting all teachers and faculty across the K20+ curriculum in pedagogical as well as instructional technology skill sets that they need to be successful; and provide a holistic, global perspective on areas where we have additional room to grow in a post-COVID digital world.

With many thanks to the outstanding authors who contributed to this Special Issue.

— Sherri Restauri

References

Anderson, L.J., & Berhtram, C. (2022). Lessons from teaching and learning at Stanford during the COVID-19 pandemic: A review: 2020-21. https://issuu.com/stanforddigitaleducation/docs/stanford_pandemic_ed_review_2020-21

Baiyun, C. Denoyelles, A., Brown, T., & Seilhamer, R. (2023). The evolving landscape of students' mobile learning practices in higher education. https://er.educause.edu/articles/2023/1/the-evolving-landscape-of-students-mobile-learning-practices-in-higher-education

Gunder, A., Vignare, K., Adams, S., McGuire, A., & Rafferty, J. (2021, June 8). Optimizing high-quality digital learning experiences: A playbook for faculty. Every Learner Everywhere. https://www.everylearnereverywhere.org/resources/

Latulippe, C., O'Sullivan, P., Williams, K., & Holiday, T. (2022). What our best college instructors do: Reflections by students about meaningful learning experiences. Everylearner Everywhere/Intentional Futures. https://www.everylearnereverywhere.org/resources/what-our-best-college-instructors-do-reflections-by-students-about-meaningful-learning-experiences/

Lynch, M. (2023). Online learning technologies: 5 transformative trends. The Tech Advocate. https://www.thetechedvocate.org/online-learning-technologies-5-transformative-trends/

Ward, M. (2022). The pandemic may have ended but the demand for edtech is growing. University Business. https://universitybusiness.com/the-pandemic-may-have-ended-but-the-demand-for-edtech-is-growing/

Wikipedia. "Mind the gap". https://en.wikipedia.org/wiki/Mind_the_gap