Editorial: Teachers and Technology: Opportunities and Lessons Learned Amidst Covid-19

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CITE Journal Volume 20, Issue 2, is published during an unprecedent time in history – a time where the insights and scholarship of authors working at the intersection of technology and teacher education are needed the most. The Covid-19 pandemic, which forced school closures from PK-16 made it very clear that new models of teacher preparation and development are needed that help teachers learn how to effectively integrate technology with content and pedagogy in both physical and virtual settings.

This need is not new; for years scholars have urged teachers and teacher educators to prepare for online and blended instruction (Ferdig & Kennedy, 2014). The 2017 U.S. Department of Education's *National Education Technology Plan* also argued for developing "a teaching force skilled in online and blended instruction." Yet little progress has been made over the years to ensure that both current and future teachers are well positioned to take advantage of technology in ways that support teaching and learning on the ground and online. As a result, "many teacher candidates are completing their licensure programs without feeling particularly confident, well-practiced, or well-prepared to integrate technology into their pedagogy" (Buckley-Marudas & Martin, this issue). The Covid-19 pandemic made it clear that teacher preparation on technology should be prioritized.

This set of *CITE Journal* articles is timely. It presents approaches to teacher preparation that help prospective teachers build their digital literacy skills while focusing on key pedagogical practices, including collaboration and reflection. Further, articles in this issue pay particular attention to technology-enhanced practices that support teacher and student engagement. Finally, articles in the issue point to important considerations and lessons learned.

First, it is important to build explicit instruction on the use of technology across teacher education curricula. As technology tools change rapidly teachers need time to become familiar with the affordances of new tools and engage in purposeful implementation. Second, it is important that use of technology helps teachers experience first-hand its potential to support their own learning and the learning of their students. Third, as we engage teachers with technology-enhanced instruction we should continue to be mindful of key practices that have demonstrated promise in supporting learning, including collaboration (Vygotsky, 1978) and reflection-on-action (Schon, 1983).

The *CITE Journal* English Education article, "Casting New Light on Adolescent Literacies: Designing Digital Storytelling for Social Justice with Preservice Teachers in an English Language Arts Education Program," by Mary Frances Buckley-Marudas and Marranda Martin engages English language arts preservice teachers in developing digital stories on their understanding of adolescent literacy. The English Education article, "'I Love this Insight, Mary Kate!': Social Annotation Across Two ELA Methods Classes," by Johnny Allred, Sarah Hochstetler, and Christian Goering engages English language arts methods students from two institutions into conversations using a web-based social annotation tool. Both articles clearly illustrate that use of technology in preservice teacher education can be leveraged to support disciplinary learning and collaboration, while showcasing effective use of technology by teacher educators.

The Current Practice article, "Video Reflection Cycles: Providing the Tools Needed to Support Teacher Candidates Toward Understanding, Appreciating, and Enacting Critical Reflection," by Jackie Sydnor, Sharon Daley, and Tammi Davis also uses video, but this time for the purpose of supporting preservice teachers' development as reflective practitioners. The use of video annotation tools in this case allowed preservice teachers, their peers, and instructors to engage in dialogic feedback regarding teaching strengths, evidence of student engagement and learning, and areas of professional growth.

The General section article, "Facilitating Student Engagement in Higher Education Through Educational Technology: A Narrative Systematic Review in the Field of Education," by Melissa Bond, Svenja Bedenlier, Katja Buntins, Michael Kerres, and Olaf Zawacki-Richter also addresses issues of engagement but with a focus on higher education. As the authors argue, technology has the potential to support student engagement, but teachers and teacher educators need to develop the knowledge and skills needed to apply them in the classroom in ways that support both learning of content and digital skills. Across a synthesis of 42-peer reviewed articles, the authors found that most of the work to date has been conducted with preservice teachers and that tools most effective at promoting engagement included social networking tools, knowledge organization and sharing tools, text-based tools, and web development tools.

Specific to engagement, the Science Education article, "Electrifying: One Teacher's Discursive and Instructional Changes Through Engagement in E-Textiles to Teach Science Content," by Colby Tofel-Grehl, Eliza Jex, Kristin Searle, Douglas Ball, Zin Zhao, and Georgia Burnell explores the potential impacts on teacher instruction through engagement with making and a specific form of technology called e-textiles in eighth-grade science. Through quasi-experimental methods, findings indicated that teacher's instruction during e-textile classes was different; it

afforded students more opportunities for classroom discourse as well as engagement with both their own questions and on a more personal level with the teacher.

Finally, the Math Education article, "Preservice Teachers' Design of Technology-Enhanced Statistical Tasks," by Stephanie Casey, Rick Hudson, Heather Barker, and Jordan Draper continues into another aspect of engagement. It examines the characteristics of technology-enhanced statistical tasks prepared by 75 preservice mathematics teachers who used specific curriculum materials and the extent to which they incorporated best practices for teaching statistics related to analysis of large datasets, continual connection to context, and engagement in the statistical investigation cycle. The authors found that the curricular materials used in this work hold promise for supporting new teachers as they plan meaningful technology-enhanced statistical tasks.

We hope readers find this set of articles meaningful and useful, as they consider next steps in the preparation of preservice and in-service teachers to respond to the demands of remote teaching and learning. We welcome readers' comments.

References

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