

Special Issue Editorial

The Teacher Educator Technology Competencies: So What? Now What?

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“All teacher candidates should have equitable, high-quality technology experiences throughout their teacher preparation programs” (Foulger, Graziano, Schmidt-Crawford, & Slykhuis, 2017, p. 436).

We wrote that sentence after having just completed a two-year research study resulting in the publication of the Teacher Educator Technology Competencies (TETCs). The TETCs were created to support the vision of a program-deep and program-wide approach to addressing technology integration in teacher preparation programs. A necessary part of this vision is that *all* teacher educators be *responsible for* and *competent at* addressing technology integration.

We envision all those who work with teacher candidates will support them in becoming effective in teaching with technology by the time they graduate, including educational technology faculty, course instructors, men-

tor teachers, and field supervisors. In addition to individual commitment, organizational commitment will be required to assure teacher candidates become tech-savvy educators. We realize a change this bold will only be successful if the responsibilities are shared.

For this vision to become reality, educational technology faculty will possibly need to work beyond their current role in teaching a stand-alone technology integration course. Technology preparation for most programs is confined to a stand-alone educational technology course, which we realize is not always the most comprehensive way for teacher candidates to learn about using technology in their teaching (Kay, 2006). By contrast, initial research of a technology infusion model has shown to be “effective in fostering TPACK development and TI (technology integration) skills among teacher candidates” (Buss, Foulger, Wetzel, & Lindsey, 2018, p. 134). Thus, educational technology faculty will need to be advocates in helping to promote and create ways in which technology use and integration efforts can build momentum from the stand-alone course (where they exist) to developing technology integration strategies that will have program-deep and program-wide impact.

For these reasons, in the concluding remarks of the article releasing the TETCs, we stated, “The TETCs should not be viewed as a solution-oriented approach to technology integration for teacher preparation; rather, they are merely a first step in a larger reform of technology integration within teacher preparation programs” (Foulger, Graziano, Slykhuis, & Schmidt-Crawford, 2017, p. 436). Now, three years later the vision is beginning to take root, at least in part, with this special issue of JTATE.

As the guest editors of this JTATE special issue entitled, “*Preparing All Teacher Educators to Support Teacher Candidates’ Integration of Technology*,” we are especially excited to help push the field of teacher education and technology toward a place where this becomes the norm. While the push to develop the TETCs was an answer to the call from the U.S. Department of Education, Office of Educational Technology report (2017) that cast an unfavorable light on the state of teacher candidates’ technology preparation, this effort had actually been in discussion and planning for several years prior to the release of the report. Read more about the TETCs by accessing Foulger, Graziano, Schmidt-Crawford, and Slykhuis (2017); Foulger, Graziano, Slykhuis, Schmidt-Crawford, and Trust (2016); Graziano, Foulger, Schmidt-Crawford, and Slykhuis (2017); Crawford, Foulger, Graziano, and Slykhuis (2019); and Slykhuis, Schmidt-Crawford, Graziano, and Foulger (2019).

“*Preparing All Teacher Educators to Support Teacher Candidates’ Integration of Technology*” implies there is a gap between where the field sits

now and this vision. In other words, many teacher educators are not ready for this calling. We believe the TETCs are an integral part of the reform needed to better prepare teacher candidates to effectively integrate technology into their teaching. Indeed, addressing technology integration throughout a preparation program would entail a multifaceted approach whereby teacher educators would support, expand on, and place in context instruction about educational technology that may have started in a stand-alone course. Such a role may entail teacher educators demonstrating how technology can be applied to content, modeling excellence in teaching with technology, providing opportunities for teacher candidates to develop their teaching practice with technology, and supporting teacher candidates' development of their professional identities to include teaching with technology. Teacher educators need support to grow and develop technology knowledge and skills (i.e., competencies). The TETCs and related criteria were created with this goal in mind. The articles in this special issue begin to inform us on how teacher educators can prepare for and develop technology competencies, while keeping in mind our ultimate goal is to better prepare teacher candidates who will enter classrooms ready to effectively use and integrate technology.

It is likely that not all teacher educators are proficient in the TETCs and would require some professional development. The first article in this special issue, *A Review of Faculty Development Models that Build Teacher Educators' Technology Competencies*, highlights what is known about professional development for teacher educators around technology. While there are parallels to PK-12 teacher professional development (PD), Parrish and Sadera discuss the unique facets and challenges for higher education faculty professional development. In fact, the guest editors of this issue along with two additional colleagues created a series of online courses focused on creating and sustaining widespread professional development for teacher educators around the TETCs (see Slykhuis, Foulger, Graziano, Hofer, Lee, & Schmidt-Crawford, 2019, for a series of online courses on TETC PD found at <http://site.aace.org/tetc/>)

To undertake any successful PD for teacher educators on the TETCs, it is important to ascertain teacher educators' understanding and proficiency of the TETCs. To that end, the second article in the special issue, *Validation of a Teacher Educator Technology Competencies Survey*, presents a validated TETC Survey to measure teacher educators' perceived proficiency for each of the TETCs. Knezek, Christensen, and Furuta provide evidence in their validation study that the TETC Survey they designed has high internal consistency between items, acceptable construct validity, and each TETC is important individually. Survey results also distinguish between faculty who are

already technologically inclined and those who are not and indicate there is little to no effect of gender or age on the TETCs.

Once it is determined what TETC PD could look like and what areas faculty most need, the TETCs can be put into action. The third and fourth articles in this special issue give two examples of applying the TETCs. In the third article, *Adopting TETCs in Integrated Elementary Mathematics and Technology Coursework: A Collaborative Self-Study of Two Teacher Educators*, two teacher educators assessed their own comfort with the TETCs in order to make improvements to the courses they teach. Thomas, Peterson, and Abebe offer insights into their own experiences and results from their collaborative approach to adopt the TETCs and discuss challenges, revisions, collaboration, impact, and ongoing work related to teacher educators' efforts to implement the TETCs in undergraduate coursework for teacher candidates.

In the fourth article, *Teacher Educator Technology Integration Initiative: Addressing the Technology Preparation Gap*, Dillon, Chang, Rondeau, and Kim discuss how their college underwent professional development that involved the integration of technology throughout their teacher preparation program. The TETCs became an important component of their project. As this program moved from the pilot stage to implementation on a larger scale, each unit determined which TETC to focus on as they charted their path towards technology integration. While this project began with grant money, Dillon, Chang, Rondeau, and Kim illustrate how the project grew after the grant ended to ultimately become sustainable.

The last article in this special issue, *Foregrounding Technoethics: Toward Critical Perspectives in Technology and Teacher Education*, presents a unique perspective and challenge to all teacher educators as they work with technology. Krutka, Heath, and Willet challenge us to step back and ensure the technology teacher educators use is done so in a thoughtful manner. The authors call on teacher educators to view all of the TETCs through the lens of TETC 9, which focuses on the legal, ethical, and socially responsible use of technology. This article cautions and insists technology be beneficial for all users, just as the TETCs are intended for all teacher educators.

Overall, this special issue illustrates the continued need to explore ways where teacher educators can be supported and prepared to effectively model and integrate technology, which may indeed directly impact teacher candidates' integration of technology into their own classrooms. This initial collection of research around the TETCs and related topics provides a useful and thoughtful lens as we examine the steps and approaches colleagues are using to begin this critical and necessary work around technology inte-

gration in teacher education. We believe this is just the first step needed in order to initiate productive conversations, collaborations, and questions by encouraging and stimulating others to conduct research and investigate the application of the TETCs in various contexts. We hope those reading this special issue will become part of the research community that will help us collectively define the “Now What?” stage of a reform effort that envisions program-deep and program-wide technology integration in teacher education. We encourage you to join our listserv (<http://teacheredtechcompetencies.org/connect>) to network with other researchers who share a common interest in the TETCs and to stay connected with current research on the TETCs.

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