Chapter 1

From Start to Finish: A Programmatic Approach to Digital Literacy in Teacher Education

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ABSTRACT

The U.S. Department of Education recently reported that single educational technology courses are not sufficient experiences to properly prepare preservice teachers for future technology-rich K-12 classrooms. Rather, continuous exposure to instructional technology is most effective in improving attitudes and beliefs toward technology and sustaining deep pedagogical practice. It is essential that all attempts to create digitally literate teachers should originate from within a cohesive program design rather than through single “drive-by” courses that integrate technology. The purpose of this chapter is to describe a programmatic approach used to design a comprehensive digital literacy experience for pre-service teachers (PSTs) using the U.S. DOE’s recommendations. The chapter will discuss various examples, including specific course assignments the EPP uses to guide PSTs as they learn to become competent digitally literate educators. Examples of implementation, copies of PST work, and reflective discussions continued challenges to sustain the design are included.

DOI: 10.4018/978-1-7998-1461-0.ch001
INTRODUCTION

In 2016, The United States Department of Education (U.S. DOE) sponsored a policy brief that identified challenges and offered guidance to teacher preparation programs in an effort to more effectively integrate technology acquisition and competence within the curriculum of new teacher candidates (DOE, 2016). Under its Guiding Principle #3, programmatic considerations, the DOE reported single educational technology courses were not sufficient to properly prepare preservice teachers for the future technology-rich classrooms that await them (Kopcha, 2012). Furthermore, the report noted that continuous exposure to instructional technology, rather than single, stand-alone courses, led to improved attitudes and beliefs toward technology and sustained appropriate pedagogical practice among preservice teachers (Polly, Mims, Shepherd, & Inan, 2010). Therefore, it is vital that any and all attempts to create digitally literate teachers should originate from within a cohesive program design rather than reside within single “drive-by” course attempts to integrate technology. Specifically, the U.S. DOE report stated, that attempts to integrate digital technology in teacher education should, “...ensure preservice teachers’ experiences with educational technology are program-deep and program-wide rather than one-off courses separate from their methods courses” (DOE, 2016, p. 14).

The purpose of this chapter is to provide a description of the programmatic approach used to design a comprehensive digital literacy experience for preservice teachers using the U.S. DOE’s recommendations. Additionally, this chapter will discuss example course projects focused on the preparation of future teachers to meet the International Society for Technology in Education (ISTE) Standards for Educators (2016); specifically, as learners, leaders, citizens, collaborators, facilitators, designers, and analysts in addition to an explanation and integration of the Technological Pedagogical Content Knowledge (TPACK) framework.

ISTE Standards for Educators

One of the guiding principles of the programmatic comprehensive digital literacy experience for preservice teachers is to build upon concepts and ideas developed through the International Society for Technology in Education Standards for Educators, also known as the ISTE Standards for Educators. The ISTE Standards for Educators is a roadmap to support teachers in guiding students in becoming empowered learners through amplified technology. These standards assist educators in collaboration with peers, finding new depths in their practice, and invites them to rethink conventional approaches to education. There are seven ISTE Standards for Educators (ISTE, 2016).

1. Learner - Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning.
2. Leader - Educators seek out opportunities for leadership to support student empowerment and success and improve teaching and learning.
3. Citizen - Educators inspire students to positively contribute to and responsibly participate in the digital world.
4. Collaborator - Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems.
5. Designer - Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability.