Chapter 5

Innovations in Mobile Photography for Digital-Age Teachers and Learners

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ABSTRACT

This chapter shares research that examined how perspectives about mobile technology integration were cultivated in a required pre-service teacher (PST) education course. Specifically, the camera feature of mobile smartphones was used to design a social-constructivist learning experience. Pre-service teachers were invited to shift from media consumers to technology producers, participating in innovative, student-centered learning. PSTs were positioned to use their prior-knowledge to engage in meaningful learning using their mobile phones in a way that modeled strategies they could use in their future classrooms to meet the learning needs of millennial students. Literature reveals that mobile tools are often used in limiting ways, such as accessing and consuming industry-produced media content. However, they have the potential to be used for active, social-constructivist learning. This chapter has implications for teacher educators and administrators in higher education who are seeking emerging practices for how to prepare PSTs to learn how to innovate using technology by designing learning experiences that focus on students as media makers.

INTRODUCTION

Historically, technology integration in public education has repeatedly failed to meet its potential to transform teaching and learning (Saettler, 1990). Research has documented the promises and pitfalls of educational media and technology and frequently teachers are blamed for the failures of technology to make significant change in schools (Cuban, 1986, 2001). Yet, as we enter into the second decade of the twenty-first century, it has been suggested that a generation of “digital native” (Prensky, 2001)
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teachers may overcome the challenges of the past and succeed in the seamless integration of technology into teaching and learning. While this prediction has appeal, the literature forecasts a dimmer picture.

Scholars report that rising teachers are likely to possess technical skills related to their daily routines, but lack experience with, and knowledge of, effective pedagogical and instructional approaches to effectively leverage technology in the design of rich learning experiences (Lei, 2009; Margaryan, Littlejohn, & Vojt, 2011; Kumar & Vigil, 2011; Domine, 2011). Further, research reports that PSTs are largely inexperienced when it comes to creating media and online content (Kennedy, Judd, Churchward, Gray, & Krause, 2008), suggesting a deficiency in their ability to design digital content for instruction, which is an essential skill for 21st century teachers (Kumar & Vigil, 2011). Research investigating technology integration in teacher education, specifically design and content creation using media, is essential in order to illuminate the intricacies of preparing pre-service teachers (PSTs) to include technology in 21st century teaching and learning.

The objectives of this chapter are to report preliminary results of a study that sought to investigate how perspectives about mobile technology integration were cultivated in a required pre-service teacher (PST) education course. In particular, the camera feature of mobile smartphones was used to frame and enact a social-constructivist learning experience with PSTs. Through the experience, PSTs were invited to shift from media and technology consumers to active constructors of knowledge and creators of original media. Findings reveal that mobile tools positioned PSTs as active learners and enabled social-constructivist learning. This chapter has implications for teacher educators and administrators in higher education who are seeking emerging practices for how to prepare PSTs to learn how to innovate using technology by designing participatory learning experiences that focus on students as media makers.

BACKGROUND

Digital Natives as Future Teachers

Numerous studies examining the digital expertise of “digital natives” (Prensky, 2001) are finding that their uses of media and technology are often narrow and specific to their personal interests and social contexts (Livingstone, 2008; Bennett, Maton, & Kervin, 2008; Margaryan, Littlejohn, & Vojt, 2011). For example, Livingstone (2008) investigated young people’s competencies using the Internet in terms of their “literacy” and uncovered that the digital generation is less knowledgeable of a range of factors including “information searching, navigation, sorting, assessing relevance, evaluating sources, judging reliability, and identifying bias” (p. 108). Smith, Salaway, and Caruso (2009) collected information about young people’s information technology (IT) use as part of an ongoing series of Educase Center for Applied Research (ECAR) studies and found that communications technologies, such as smartphones or other “Internet-capable handheld devices, continue to dominate time spent with technology and are frequently used for text-messaging, social networking, and “check[ing] information such as news, weather, sports, [and] specific facts” (p.6). In a study examining PSTs uses of technology, Kumar and Vigil (2011) confirmed that students are adept at using tools, but rarely create, design, or produce media. The authors urged teacher educators to “provide more exposure to new technology and design more educational projects that require PSTs to create content using digital technologies” (p. 151). Yet, research examining the teaching strategies and types of projects that teacher educators use to prepare PSTs for this task is scarce.