Chapter 12
A Global Conversation on Effective Technology Integration in Education

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ABSTRACT
This chapter explored the technology perceptions and preparedness of pre-service and in-service teachers from three different countries. Twenty-one students in the Republic of Korea, twelve students in the United Arab Emirates, and thirty students in the United States of America were virtually connected. They participated in weekly online discussion forums for six weeks and shared how well prepared they felt about using technology in their content areas and how they would effectively use technology in their future classrooms. This study can serve as a good model for facilitating a global conversation and supporting a reflective online conversation across geographic distances and cultural barriers.

INTRODUCTION
As the world has become more closely connected through the advance of technology, societies have become more heterogeneous with respect to different cultures and multiple perspectives. This diversity requires that students learn to learn about others and develop communication and social skills (De Lisi, 2002; Schmitt, 2001). Interacting with others and sharing experiences have now become important parts of the learning process. In recent years, studies have proposed the use of intercultural communication to promote understanding among students across geographic distances and foster students’ global awareness and international experience. An increasing number of universities in the U.S. have established intercultural distance learning partnerships with
other countries to promote multicultural understanding and diversified learning environments (see Cifuentes & Murphy, 2000; Freedman & Liu, 1996; Liang & McQueen, 2000; Nickel, 2001; Shih & Cifuentes, 2001). In light of this new learning paradigm, this study was designed to provide students with the valuable opportunity to expand their horizons by communicating across divides and differences about how best to integrate technology in education.

By 2005, the U.S. had spent over $38 billion to bring computer and Internet access to public schools, ensuring that 99% of schools and 94% of instructional rooms had access to the Internet (NCES, 2005). With the influx of technology in schools today, the 21st century vision of student-centered, inquiry-driven learning has the potential to be realized. However, simple access and use of technology in the classroom does not guarantee that this vision will be achieved. Students must be able to use technology “to learn content and skills, so that they know how to learn, think critically, solve problems, use information, communicate, innovate, and collaborate” (Partnership for 21st Century Skills, 2006, p. 11). Given this emphasis, those who choose teaching as a profession face a daunting challenge ahead. Not only must they be prepared to teach content to students and manage the classroom, they must also seamlessly integrate technology into the curriculum. To achieve this objective, teachers must be prepared to “facilitate and inspire student learning and creativity; design and develop digital-age learning experiences and assessments; model digital-age work and learning; promote and model digital citizenship and responsibility; and engage in professional growth and leadership” (ISTE, 2008).

However, only one-third of all public school teachers and 44% of teachers with three years of experience or less in the U.S. felt well prepared or very well prepared to use computers and the Internet for instruction (NCES, 2005). Pre-service teachers are typically born in the 1980s and are usually comfortable with technology use. However, according to the national statistics, this comfort does not necessarily translate to knowledge about effective use of technology in order to enhance teaching and learning. The 21st century vision of learning presents new objectives for current teacher education programs; “Preparation of tomorrow’s teachers does not depend solely on how well emerging technologies are incorporated into college coursework; instead, it rests on how well incoming teachers are taught to leverage the technologies to help their students develop these same skills” (Lambert & Cuper, 2008, p. 265). This statement suggests that pre-service teachers be provided more opportunities to leverage technologies in education courses and field experiences for their preparation for future technology integration.

BACKGROUND

Factors Affecting Technology Use: In-Service Teachers’ Perceptions

In order to assess pre-service teachers’ needs, it is helpful to review the current state of technology use among in-service teachers. Cuban (2001) argues that computers are underused as instructional tools in part because school systems have not been restructured to fully support integration. Barriers to effective technology integration include lack of time during the day (Forgasz, 2006; Franklin, 2007; Lim & Chai, 2008; Russell, Bebell, O’Dwyer, & O’Connor, 2003), too much curriculum to cover (Franklin, 2007; Lim & Chai, 2008), high stakes testing (Franklin 2007; Lim & Chai, 2008), lack of access (Forgasz, 2006; Pasternak, 2007), technical problems/support (Forgasz, 2006), student behavior (Forgasz, 2006; Lim & Chai, 2008), and lack of professional development (Coffland & Strickland, 2004; Forgasz, 2006; Russell et al., 2003). Despite the fact that almost every public school in the U.S. is wired for technology, concerns about the digital divide
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