

## Chapter 25

# Building Education and Technology Competencies for a Changing Society

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### ABSTRACT

*This chapter provides an overview of needed competencies in the education and technology areas for a changing society. Advanced technology has changed the structure of the economy and should be changing the K-12 and postsecondary classrooms. Society is requiring higher levels of skills that schools were not initially designed to teach. Specific competencies are needed for educators and higher education students in order to prepare a college- and career-ready workforce. Educators must begin or continue incorporating digital tools and technology in their content in order to meet the demands of an increasingly technological world.*

### INTRODUCTION

Higher education institutions are facing trends that relate to student retention and graduation rates, students in crises, globalization, financial issues, and technology. By the year 2018, postsecondary education and training will be needed for 63% of all jobs (Achieve, 2012). Based on the Lumina Foundation's 2012 report titled, *A Stronger Nation through Higher Education*, there needs to

be 800,000 more graduates in order to serve the workforce by the year 2025. In order to prepare students for this lifelong process, it will require educators to incorporate technology in the classrooms to accompany a student's everyday use of technology. The purpose of this chapter is to provide an overview of needed competencies in the education and technology areas for a changing society.

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The objectives of this chapter are to discuss current competencies that individuals should have in order to succeed in today's workplace. To engage the digital native students, educators have to find the most appropriate technology. This may require educators to change their perceptions and use technological tools to motivate and engage their students. Both K-12 and higher education educators need to advance and ensure that current and future students are engaged in classroom learning and develop skills so they can compete within the global economy (Technology in Education, n.d.). Incoming college students may be familiar and equipped to use computers; however, the technological tools need to be used appropriately within higher education classrooms in order to match the learning outcomes with student success. The labor market has changed over the past several decades and employment opportunities have been altered. Positions now provide reduced traditional benefits and flexible work projects instead of stable working arrangements. These workers are required to be highly skilled and globally oriented in order to compete in the workforce (Jerald, 2009).

Globally competent college students need specific skills as well as being an internationalist and adaptable in challenging settings. This chapter also reviews trends that are affecting the development of educational and technological competencies. There are state and federal programs that are promoting global literacy and initiatives that promote key international education. Businesses and industries are also affected and have collectively identified a serious shortage of skilled employees. Critical competencies have been recognized and are needed to provide workers within the global marketplace.

This chapter is organized using the following sections: using technology in education, implications for educators, trends, and conclusion.

## **USING TECHNOLOGY IN EDUCATION**

Miller (2009) indicated that preparing educators to deliver college and career-ready instruction is a simple process:

*If we want the very best for our students, their teachers must be able to provide them with the very best education. The members of the next generation of Americans will need to graduate from high school ready to compete in a world of rapid globalization, burgeoning technological innovations, and changing labor markets. (p. 1)*

Teacher quality is tied closely with student achievement; however, there is a lack of research and insufficient data on what the most effective teacher preparation programs would be to equip teachers to guide students to becoming informed citizens (Miller, 2009).

The Partnership for 21<sup>st</sup> Century Skills (Overview, n.d.) initiative was developed to assist teachers and administrators with integrating skills into core academic subjects. Promoting an understanding of academic content is through interdisciplinary themes such as global awareness and financial, economic, business, and entrepreneurial literacy. Learning, innovation, information, and technology skills will prepare students for a complex world and train them for constant change in the use of technology and collaboration tools. Educators are being encouraged to use technological tools to enhance student engagement and access. Technological tools can include Web-based instruction, learning management systems, virtual chat rooms and discussions, connecting through Webcams, Skype, and Face time applications.

The digital divide refers to providing students with adequate access to technological resources within K-12 school systems. Students of marginalized populations may not have access to

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