

# Integrating Web-Based Technologies into the Education and Training of Health Professionals

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## INTRODUCTION

With rising health care costs and the need to treat more and more people with chronic health conditions, many people wonder how healthcare can be advanced in America. Along with healthcare reform, education and training will play a significant role in meeting increased demands for health professionals. In this chapter, exploration of how online learning and instruction can be used to meet the educational needs for the healthcare industry is detailed.

Distance education, e-learning, computer mediated, web-based, and online instruction are terms used to describe education delivered through computer-based technologies. Whatever term is chosen, such computer-based technologies are essential components of the preparation and continuing education of health professionals. For many health professions, formal education, as well as continuing education, includes some type of web-based learning, with some programs completely online.

The American Journal of Health Promotion (2009) defined health promotion as:

*Health Promotion is the art and science of helping people discover the synergies between their core passions and optimal health, enhancing their motivation to strive for optimal health, and supporting them in changing their lifestyle to move toward a state of optimal health. Optimal health is*

*a dynamic balance of physical, emotional, social, spiritual, and intellectual health. Lifestyle change can be facilitated through a combination of learning experiences that enhance awareness, increase motivation, and build skills and, most important, through the creation of opportunities that open access to environments that make positive health practices the easiest choice.*

In this chapter, health promotion refers to all education and programming relating to health that is intended to promote positive health outcomes. Many health promotion interventions and programs are conducted online. In fact, the term e-health has been created to describe web-based health promotion initiatives. Health care professionals and health educators are using online instruction to teach patients. Higher education courses that promote lifelong wellness, including physical activity-based courses, are also using online learning formats.

The objectives of this chapter are: 1) to understand the benefits, quality indicators and use of online learning and instruction in health; 2) to discuss whether online learning and instruction is appropriate for training health professionals and for the delivery of health promotion; 3) to review an example of how blended and online instruction can be used for health promotion in higher education; 4) to discuss future trends for online learning and instruction in health.

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## BACKGROUND

In 2013, the Bureau of Labor Statistics reported there were more than 15.8 million jobs in the combined healthcare industries (Torpey, 2014). It is projected that over 4 million jobs will be added between 2012 and 2022, which is more than any other industry (Torpey, 2014). As the largest industry, the demands for preparation and continuing education of health-related professions comprise a significant percentage of adult education conducted in the United States.

Health care professionals are in demand throughout America, but are particularly needed in Health Professional Shortage Areas (HPSAs). According to the U.S. Department of Health and Human Services (2016), 8,200 practitioners are required to meet the need for primary care providers in HPSAs. In order to meet the demands for qualified health care professionals in America, institutions of higher education have sought cost efficient and effective methods of preparing and training health care providers. One way to address the high demand for education, especially for areas that do not have institutions of higher learning, is to begin to offer and expand distance education opportunities. The current use and continued expansion of online learning and instruction in higher education has caused health-related disciplines (and most other disciplines) to ask some difficult questions, which will be explored in this chapter.

## SIGNIFICANT QUESTIONS AND ISSUES IN ONLINE LEARNING AND INSTRUCTION IN HEALTH

The health and wellness of individuals, communities, and society are largely dependent on health care providers and health promotion. Consequently, much discussion and debate has occurred as the delivery of adult education and training has evolved to include web-based learning and instruction in the field of health. Some of the significant questions and issues in the discussion about online learning and instruction include the

benefits, quality indicators, and the current use in the field of health.

One of most often asked questions is, “what are the benefits of online learning and instruction?” For potential students who are employed full-time, on active-duty in the military, have family obligations, or are geographically remote, online programs may be the only option for completing their education. According to Chaney et al. (2009), distance education programs benefit students and the university at large. For students, graduation time can be decreased through easier access to courses. Chaney believes distance education diversifies student populations as courses are accessible from any part of the country or world. For the university, strains on the built environment are resolved as no space is needed on campus. Costs are also reduced as all types of printing are eliminated when course materials and assessments are conducted online.

Online learning and instruction can also benefit the environment. Many campuses have struggled to resolve parking and air quality issues. Distance education reduces travel to and from campus, which significantly reduces student and faculty costs for travel, and the inevitable environmental effects associated with auto admissions.

Another question asked is, “what are the quality indicators of online learning and instruction for health-related professional education?” Like all disciplines, health professionals, faculty, and students have their opinions about what contributes to effective web-based learning and instruction. Reeves and Reeves (2008) provided 10 dimensions that should be considered during the instructional design, implementation and evaluation of online courses in health and social work. The model they describe for health and social work education includes 10 dimensions of interactive teaching and learning:

1. Pedagogical philosophy;
2. Learning theory;
3. Goal orientation;
4. Task orientation;

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