

# Chapter 20

## Assessing Online Courses in Health Education: Training a 21st Century Health Workforce

**Debra N. Weiss**  
*Florida Atlantic University, USA*

### ABSTRACT

*Internet-based health education is being used increasingly around the world for two related purposes: 1) to train a global health workforce of nurses, physicians, health educators, and other health workers, and 2) to educate the public about disease prevention and management (e.g., in outbreaks of SARS in China and Ebola in Africa). Assessment of online health education is vital to maintain quality control and to share best practices. Online health education has been found to have significant positive effects on e-learners, comparable to those of traditional face-to-face instruction. In developing countries where there is a critical shortage of health workers, distance education is needed to train large numbers of health workers rapidly and effectively. In developed countries, online health education is a cost-effective means of providing access to 1) higher education for individuals who are employed full time and wish to pursue training in the health professions, 2) workplace continuing education for health professionals, and 3) public health campaigns that promote healthy behaviors. In this chapter we look at what is going on in the field now, and what can be done in the future to use technology to advance the mass dissemination of health education.*

### INTRODUCTION

According to the World Health Report (World Health Organization, 2006), there is an urgent need for trained healthcare workers. In 2006, shortages were critical in sub-Saharan Africa, which had only 4% of health workers but 25% of the global burden of disease; in contrast, for the same period,

the Americas had 37% of health workers but only 10% of the global burden of disease. Worldwide, in 2006 there was an estimated shortage of almost 4.3 million doctors, midwives, nurses, and support workers (World Health Organization, 2006). These shortages are highlighted when one looks at the density of health workers per 1,000 population: health worker density ranged from a

DOI: 10.4018/978-1-4666-9494-1.ch020

low of 2.3 per 1,000 population in sub-Saharan Africa to a high of 24.8 per 1,000 in the Americas. Europe was significantly higher than any other area excluding the Americas, at 18.9 per 1,000 population. The density of other areas was in the low single digits, yielding a total world density of 9.3 health workers per 1,000 population (World Health Organization, 2006).

Based on these statistics, the World Health Organization made the training of health workers at all levels—from MDs to community workers and volunteers—a top priority for world health. Clearly, more medical schools, nursing schools and public health schools were needed to train these healthcare workers. However, building new institutions was certain to cost a great deal of money. Economies were needed. To keep costs down, the World Health Organization recommended using regional resources and IT, which can provide access to education for large numbers of students at a lower cost than traditional face-to-face instruction. The World Health Organization's stated goal was to guarantee both universal access to healthcare and social protection tailored to each country's situation (World Health Organization, 2006).

There is a huge potential for advancing health education through online courses, given the explosion of virtual universities springing up around the world. In developing nations in Asia, where the online markets are young, growth is booming (University World News, 2013, 2014). In Japan, in June 2014 more than 300,000 students were enrolled in online classes, and the government has been funding the building of high-speed networks, creating an e-platform for schools and institutions of higher education (University World News, 2014). Such initiatives are also underway in Singapore, Bangladesh, Indonesia, and Sri Lanka (University World News, 2014). In China, ChinaEdu, reported that in 2013, 211,000 students were enrolled in online degree programs, and an estimated 100,000 students were enrolled in non-degree online programs (University World News, 2014). However, there is much room for

growth in the number of training programs for health professionals offered online in China; in 2014, only 10.7% of the institutions that conferred health profession degrees offered them online (Peng et al., 2014).

A recent study in Italy found that online health education can “support massive educational interventions reaching results hardly attainable with traditional education” (Mazzoleni et al., 2012, p. 939). The investigators praised the use of online health education for its effectiveness, economy, and popularity with nurses and other health professionals, but noted that it may not be appropriate for all health education needs (Mazzoleni et al., 2012). In most developing countries, the market for Internet-based health education is in its infancy, with enormous room for growth.

India has the most mature e-learning market in Asia; its Indira Gandhi National Open University (IGNOU), founded in 1985, serves more than 3 million students in India and other countries, including a pan-African branch in 20 African countries (IGNOU, 2015). India's Distance Learning Council (DLC), established in 1991, is responsible for the promotion, coordination and maintenance of standards for all Open and Distance Learning courses throughout the country (IGNOU, 2009). The DLC has published standards for recognition and accreditation in a Handbook (IGNOU, 2009), which may be a useful guide in the assessment of other countries' distance education programs. Through its School of Health Sciences, IGNOU (2015) offers healthcare worker courses for programs that lead to certificates in Newborn and Infant Nursing, Maternal and Child Health Nursing, Home-Based Health Care, and Health Care Waste Management; undergraduate degree programs in nursing, postgraduate diplomas in HIV Medicine, Hospital and Health Management, Maternal and Child Health, and Geriatric Medicine, a Doctor of Philosophy in Nursing and Post Doctoral Certificate in Dialysis Medicine. In addition, the Continuing Education School offers a diploma in Nutrition and Health Education.

26 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/assessing-online-courses-in-health-education/137973](http://www.igi-global.com/chapter/assessing-online-courses-in-health-education/137973)

## Related Content

---

### 21st Century Problem-Based Learning: A Medical Education Asset by Rational Design or Retrofit

Susan Ely, Joanne H. Greenawald and Richard C. Vari (2020). *Handbook of Research on the Efficacy of Training Programs and Systems in Medical Education* (pp. 110-129).

[www.irma-international.org/chapter/21st-century-problem-based-learning/246623](http://www.irma-international.org/chapter/21st-century-problem-based-learning/246623)

### E-Health: Modern Communication Technology Platforms for Accessing Health Information

Wayne Usher (2017). *Health Literacy: Breakthroughs in Research and Practice* (pp. 46-67).

[www.irma-international.org/chapter/e-health/181186](http://www.irma-international.org/chapter/e-health/181186)

### Cultivating Professionalism in the Healthcare Professional

Carol Rentas (2022). *Handbook of Research on Developing Competencies for Pre-Health Professional Students, Advisors, and Programs* (pp. 24-45).

[www.irma-international.org/chapter/cultivating-professionalism-in-the-healthcare-professional/305088](http://www.irma-international.org/chapter/cultivating-professionalism-in-the-healthcare-professional/305088)

### Defying the Odds: DACA, DREAMer, and International Students Applying to U.S. Medical Schools

Yoshiko Iwai and Keny O. Murillo Brizuela (2022). *Handbook of Research on Advising and Developing the Pre-Health Professional Student* (pp. 305-331).

[www.irma-international.org/chapter/defying-the-odds/303447](http://www.irma-international.org/chapter/defying-the-odds/303447)

### Personal Health in My Pocket: Challenges, Opportunities, and Future Research Directions in Mobile Personal Health Records

Helen Monkman, Andre W. Kushniruk and Elizabeth M. Borycki (2017). *Health Literacy: Breakthroughs in Research and Practice* (pp. 156-178).

[www.irma-international.org/chapter/personal-health-in-my-pocket/181191](http://www.irma-international.org/chapter/personal-health-in-my-pocket/181191)