

Chapter 4

Technology in Transformative Learning Environments

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ABSTRACT

Health science educators are increasingly bombarded with proposals to integrate instructional technology into the curriculum to enhance learning. While it may be that providing more options for delivering instruction in different formats provide instructional benefit for educators, the unique nature and goals of health science education require a systematic and integrative approach when instructional technology is introduced into the curriculum. Providing support for transformative learning pedagogies and high-level learning that assists students in developing a reflective professional identity should be a major goal of instructional technology adoption. This chapter develops a framework that health care educators can use to guide the integration of instructional technology in a manner that provides instructional affordances for transformative learning and supports instruction that produces reflective practitioners.

INTRODUCTION

Creating the conditions for and the skills of effective adult reasoning and the disposition for transformative learning-including critical reflection and dialectical discourse-is the essence of adult education and defines the role of adult educator.
– Jack Mezirow (2009 p. 22)

DOI: 10.4018/978-1-4666-8571-0.ch004

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Education for the professions and health science education more specifically requires a unique perspective and approach. Various authors have pointed out the unique nature of educating for practice demands an integrative pedagogy. This pedagogy presents knowledge, technical skills and ethical, patient-centered practices in ways that help students become reflective practitioners. Benner (1984), Benner and Sutphen (2007) and Benner, Sutphen, Leonard and Day (2010) have called for health science education that focuses on the following:

- Contextualization;
- Authentic learning experiences;
- Multiple ways to think;
- Formation of professional identity.

Teaching knowledge and skills separately or in a decontextualized manner produces fragmented educational experiences. Students should be taught in an environment where knowledge and thinking are acted upon and applied in a particular context. Faculty members must provide linkages between the professional knowledge and the use of that knowledge in the practice setting.

Authentic learning assessment should occur as often as possible in the classroom. In some cases, even clinical teaching situations do not approximate the dynamic clinical setting and many assessments focus in on fine-grained or elementary competencies. Students need instruction and assessment in clinical settings encompassing a diverse set of patient care situations

Students must learn how to analyze and evaluate scenarios and situations. A singular focus on teaching scientific and critical thinking skills needs to be augmented with other ways of thinking, such as the ability to reason through the trajectory of a patient's developing situation. In addition, students must be able to integrate patient needs with their own life experience. Educators must also facilitate the formation of a professional identity which supports reflective practice

The practice of health science, with its combination of knowledge, cognitive and hands-on skills, has a unique transformative nature that requires a unique pedagogical approach. As a number of health educators such as Benner (1984), Noone (2009) and Berragan (2013) have pointed out, health professions require education for practice. Curricula and instruction must be designed to deliver professional education in a contextualized fashion that links knowledge, skills and ethical and reflective practice behavior.

One unique perspective on learning is Jack Mezirow's transformative learning theory, which has been developed over the last several decades. His theory is specific to adult learners and focuses on learning mechanisms involved in creating perspective change or what has also been called a change in frames of reference.

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