

## Chapter 89

# Exploring Assessment of Critical Thinking Learning Outcomes in Online Higher Education

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### ABSTRACT

*Online education has grown to more than 6 million students with an average age of 33 years old (Kolowich, 2012; Selingo, 2012; Sheehy, 2012). Research indicates online programs are part of many institutions' strategic planning initiatives. Institutions are undergoing increased scrutiny from accrediting bodies, employers, and adult learners. To remain competitive and valid in this changing environment, a significant issue for leaders of online higher education institutions is how to effectively assess online cognitive learning outcomes, such as critical thinking. Adding to the challenge of online assessment of critical thinking is the contextual nature of critical thinking and two differing approaches to assessment. Leaders of online higher education institutions should seek a critical thinking assessment that is based on a theoretical framework of Transformative Learning and Adult Learning Theories. This is explored in this chapter.*

### INTRODUCTION

The “the higher education landscape is rapidly shifting” (Kelderman, 2013, p. 1). In 2012 there were over 4000 colleges and universities in the United States, more than 6 million online students with an average age of 33 years old (Kolowich, 2012; Selingo, 2012; Sheehy, 2012). A survey conducted by Babson Survey Research Group

in 2011 indicated enrollment of online students doubled from 2007 to 2011 and 65% of the 2500 institutional leaders surveyed said online learning was part of their long-term strategy (Sheehy, 2012). During 2011, the U.S. Department of Education hosted a meeting in Washington to discuss the changes and innovations in higher education—mostly rooted in technology (Selingo, 2012). This means, with the rapid growth of online

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adult education there is increased pressure from adult learners, employers and accrediting bodies for institutions to provide relevant, fast-paced and rigorous learning. Over the next five to six years, online education is expected to bridge the gap in credentials for over 50% of jobs in some states like Ohio (Pant, 2012). Consequently, institutional leaders of online higher education are facing questions and scrutiny from some “employers [who] are skeptical about the validity of college ... degrees” (Mangan, 2013, p. 1). They question if adult learners are developing the skills needed to be successful in the workplace. Other stakeholders in adult education are paying close attention to the effectiveness of online adult education. They ask questions like, “How do we know if online adult students have learned?” and “If adult students are learning online, how much are they learning and is the learning relevant?” A 2013 Gallup poll indicated that although online higher education is viewed as more accessible and more affordable, many believe “...it provides less rigorous testing and grading...has less credence with employers ...” (Saad, Busteed, & Ogisi, 2013). This has led many online adult education leaders to aggressively evaluate online learning outcomes and their assessment methods.

Typically faculty measure student learning in the classroom. Since “...globalization has become the focal point of higher education...” (Rust & Kim, 2012, p. 1) institutional leaders have to consider assessment online from student and institutional levels, which means understanding how and why methods of online adult education assessment are used. Leaders will need to justify outcomes, and possibly the methods used, to outside stakeholders—students, employers and accrediting bodies. The implications of effective assessment are significant because the institution’s academic credibility and subsequent competitiveness are at stake. The issue of effective measurement of online learning outcomes becomes increasingly challenging when evaluating cognitive learning such as critical thinking,

sometimes referred to as higher order thinking. This chapter considers the issue of online adult education assessment of critical thinking. This is significant because institutional leaders can use online assessment for learning measurement as well as a means to differentiate programs globally to remain competitive.

## **BACKGROUND**

Adult education is a transformative learning process, in which the learner is engaged throughout. Therefore, effective assessment of cognitive learning in online adult education requires an understanding of adult learning, its principles and Transformative Learning Theory. Before considering how to assess the cognitive learning outcomes of critical thinking, adult education leaders should understand transformative education and adult learning.

Transformative Learning Theory, advanced by Mezirow (1991), describes the complexity of how learners transform presuppositions and mental habits to include other perspectives; thereby changing mental schemes and reformulating meaning from their experiences (Merriam, Caffarella & Baumgartner, 2007; Cranton, 1994). In this process, adult learners challenge existing assumptions and thinking strategies by openly considering other viewpoints. As they consider alternative ideas and ways of thinking, they systematically change their thought paradigm. This process involves the learner’s engagement throughout. The six principles of adult learning should be integrated to create an ideal environment for transformative learning to take place.

## **Adult Learning**

Andragogy or adult learning challenges “static concepts of intelligence... [and] limitations of conventional education” (Lindeman, 1926, pp. 27-28). Its process is unlike the traditional ap-

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