Chapter 43
Cultivating Critical Thinking Skills in Online Course Environments:
Instructional Techniques and Strategies

Curtis L Todd
Atlanta Metropolitan State College, Atlanta, Georgia

Kokila Ravi
Atlanta Metropolitan State College, Atlanta, Georgia

Kenja McCray
Atlanta Metropolitan State College, Atlanta, Georgia

ABSTRACT

The development and demonstration of students' critical thinking skills is one hallmark of effective teaching and learning. A promising scholarly literature has emerged in addition to webinars, conferences, and workshops to assist in this endeavor. Further, publishers offer cleverly marketed bundle packages with enhanced supplemental materials and instructors contribute instructional strategies and techniques. Nevertheless, gaps still exist in the scholarship related to effective student engagement. The development of higher order thinking skills in online educational settings is one such area requiring additional inquiry. This article transitions beyond mere theoretical constructs regarding best practices and standards for distance education. In doing so, it provides practical applications through the use of case studies in demonstrating a "how to" student engagement model and framework, which fosters the type of online course environment and useful strategies for developing critical thinking skills.

INTRODUCTION

A shared goal in education, which exists across all disciplines from elementary through college, is for students to develop critical thinking skills (Willingham, 2007). Educators develop course materials that include reflective writing exercises, engaging class activities, and develop topics intended to generate vigorous discussions. With the rapid growth of distance education programs and online course offerings, instructors have struggled to ensure that their pedagogy, curriculum design, and delivery are properly aligned to cultivate critical thinking skills (Allen & Seaman, 2013). The overarching goal is for students to engage in higher order thinking skills that include applying, analyzing, evaluating, and creating (Forehand, 2005). Challenges typically include lack of time-on-task opportunities due to some of the limits associated with traditional face-to-face courses. Structural and logistical constraints also impede democracy in the classroom, prohibiting particular students from having a voice and full participation in course activities. Such issues can be overcome in online settings (Yu & Richardson, 2015).

This article explores the growth of distance education programs and examines the defining features of critical thinking. The Online Student Engagement Model, an amalgamation of best practice standards, is provided to contextualize the development of critical thinking skills within online course environments. Further, the desired student competencies are explored holistically. Finally, this entry concludes with case studies demonstrating the development and design, planning, and delivery methods that have been used to foster the acquisition of critical thinking skills in online course environments.

The Growth of Distance Education

Higher education has experienced significant growth in online learning. The term refers to an array of programs using the internet to facilitate interactions between instructors and students, as well as among students, via fully online learning or combined formats known as blended learning (Horn & Staker, 2010). This growth has resulted in traditional brick and mortar colleges and universities reimagining and reengineering how they conduct teaching and learning in efforts to fully accommodate students who may be seeking only a specific course, as well as those endeavoring to complete an entirely web-based program of study. Online learning is now an integral part of higher educational systems (Anderson, 2014). According to Allen and Seaman (2017) over 6 million students had taken at least one online course as of Fall 2015, an increase of 3.9% over the previous year. There is no indication that there has been a decrease in student demand and institutional offerings. More than 71% of colleges and universities offered online courses at the time (2013). According to Bakia, Shear, Toyama, and Lasseter (2012, p.2), three perceived potentials for flexibility in access to content and instruction frame the popularity of online learning by:

1. increasing the availability of learning experiences for those who cannot or choose not to attend traditional schools;
2. assembling and disseminating instructional content more efficiently; and
3. increasing student-instructor ratios while achieving learning outcomes equal to those of traditional classroom instruction.

Yet, there are challenges. The Report "Changing Course: Ten Years of Tracking Online Education in the United States" (Allen & Seaman, 2013), surveyed over 2,800 academic leaders. The study found

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