

# Chapter IV

## Learning and Teaching with CMC in the U.S. Higher Education Arena

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### ABSTRACT

*This chapter provides an overview of current issues and trends related to the impact and integration of computer mediated communication (CMC) and technological innovation in the teaching and learning environments of higher education in the United States. The chapter includes an introduction to the higher education arena, and then focuses on the current learning and teaching environments. Topics such as learning styles, learning behaviors, and CMC as an infrastructure in the student environment are discussed, along with transformational changes in the teaching environment. Recent fundamental changes in teaching and learning due to the incorporation of CMC are also discussed.*

### INTRODUCTION

The opportunity for educational attainment and the acquisition of knowledge have been long standing societal values in the United States. As of 2003, more than 17 million students were enrolled in institutions of higher education (U.S. Department of Education, 2005). Nearly 79 percent of college students agree or strongly agree that Internet use has had a positive impact on their college academic experience (Jones & Madden, 2002). The Internet and technological changes are influencing all aspects of teaching and learning.

Hiltz and Turoff (2005, p. 60) argue that “current evolutionary changes in educational technology and pedagogy will be seen, 50 years from now, as revolutionary changes in the nature of higher education as a process and as an institution.” The currently evolving process and institutional forces of change are just part of a long history of adaptation to innovation and knowledge in academia.

This chapter outlines the current learning environment, including a look at student demographics and technology use, and examines forms of computer mediated communication (CMC) as infrastructure and environment in today’s acad-

emy. Although the chapter focuses on the United States, the literature runs deep with articles and research about CMC models and teaching experiences from Australia, Europe, Asia, and elsewhere around the world. The global village is a physical and virtual reality.

The chapter also explores the learning styles, learning behaviors, and learning expectations of today's net generation students. Final sections present information on the teaching environment and how CMC is affecting teaching behaviors, along with concluding remarks on academies leading change for the future.

## **OVERVIEW OF HIGHER EDUCATION IN THE UNITED STATES**

Higher education has been a focal point of society in the United States for over a century. During this time, transitional points have shifted the direction of teaching and learning. Early institutions had a relatively small number of students, generally from elite families, and were focused on learning for religious pursuits. For example, Harvard College was founded in 1636 to provide a supply of clergy that Puritans expected would benefit all (Boyer, 1990). Goodchild (2002) identified the purpose of the colonial colleges as "preparing men for ministering to their own community and educating the colonists to become a 'lettered' people" (p. 320). Higher education, in its many iterations over the years, has provided for educational, research, and service contributions to the nation.

Since the mid-1800s, the focus of higher education has consistently moved from educating a select few to educating the many. The Morrill Act of 1862 gave federal land to the states, with proceeds from the sale of that land supporting liberal arts education and vocational training to support the agricultural and mechanical revolutions. In 1887, the Hatch Act expanded learning to farmers by supporting university-sponsored

agricultural experiment stations (Boyer, 1990). The appointment of a Presidential Commission on Higher Education in 1947 by Harry Truman further moved higher education from an elite structure to a mass system. The rise of the Internet and the World Wide Web at the end of the 20<sup>th</sup> century has provided a tipping point for perhaps the most massive shift in higher education, from strictly "brick and mortar" universities to "brick or click" institutions.

Although this chapter will not focus on the for-profit sector, organizations such as the University of Phoenix, are also driving the availability of online classes with sophisticated educational services (Dunderstadt, 2002). The growth in for-profit universities and their educational models spark debate. An article in the *New York Times* noted that,

*The University of Phoenix became the nation's largest private university by delivering high profits to investors and a solid, albeit low-overhead, education to midcareer workers seeking college degrees. But its reputation is fraying as prominent educators, students and some of its own former administrators say the relentless pressure for higher profits, at a university that gets more federal student financial aid than any other, has eroded academic quality.* (Dillon, 2007, p. 1)

In a response, the institution's president stated that "the University of Phoenix... has become the largest private university in the United States by successfully serving the educational needs of more than 600,000 current students and graduates, many of whom were ignored or excluded by traditional colleges and universities" (Pepicello, 2007, p. 11).

Howard-Vital (2006) and others suggest that, at the very least, some characteristics of these for-profit institutions may be worth modeling by traditional colleges and universities—in particular the speed and ease with which they enable a diverse array of students to earn degrees, often

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