Chapter 9

Engaging the Digitally Engaged Student: Comparing Technology-Mediated Communication Use and Effects on Student Learning

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ABSTRACT

The role of communication technologies in the learning process is both a dynamic and complex issue. Yet, we know surprisingly little about how the use of specific communication technologies may influence classroom performance, key learning outcomes, and other measures of course satisfaction. The research reported here attempts to add to our knowledge about the role of communication in the technology-enhanced classroom (TEC) education and in technology-enhanced online (TEO) education through a direct comparison of two courses. Our findings indicate additional support for “The No Significant Difference Phenomenon.” Furthermore, we found that prior experiences lead students to gravitate towards their preferred learning environments, and that basic website elements are required in any learning environment to enhance student outcomes. Finally, we found that when used appropriately, the benefits of communication technology use in education outweigh many of the drawbacks.

INTRODUCTION

There are few educational settings in much of today’s world without some form of advanced technology being used. From the introduction of the personal computer in some classrooms in the early and mid-1980s, to today’s students carrying around laptop and tablet computers wirelessly accessing the ever-expanding virtual universe of the Internet, students and teachers are faced with many decisions regarding the use of technology in and out of the classroom. Although technology is ubiquitous in face to face (FtF) as well as
online education, when the role of communication technology is discussed in relation to education, most of us initially think of distance education or distance learning. The United States Distance Learning Association (n.d.) defines distance learning on their website as “the acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning at a distance” (www.usdla.org). In such a definition, mediated information and various technologies are clearly highlighted.

Over 4.6 million students were enrolled in at least one online course in 2008, up 17% from the previous year (Allen & Seaman, 2010). With the USDLA (http://www.dltoday.net) reporting that the majority of post-secondary students in the U.S. will participate in online virtual learning at some level by 2011, our understanding of this learning environment, and the technologies that make it possible, is especially important.

The use of computer-based technologies is not only relevant to distance learning, but also has become an important part of traditional education (see Sherblom, 2010). In some instances the same technologies that may be used to deliver instruction in a distance education course today, can be used to enhance the traditional classroom environment. For example, in large classes where face-to-face (FtF) exchanges are limited, technology may provide a means for sharing information and facilitating communication between instructors, students, and others. Computer-mediated communication (CMC) use in the classroom has become a prevalent fixture in education today, according to Thompson (2008). Bejerano’s (2008) research also parallels this changing environment, noting that collegiate classrooms are viewing the Internet as the new medium for instruction.

Many of the technologies used in distance learning and enhanced traditional classrooms are primarily communication technologies. Examples include chat rooms (Kirkpatrick, 2005), virtual worlds (Nesson & Nesson, 2008), discussion boards (Levine, 2007), and videoconferencing (Umphrey, Wickersham & Sherblom, 2008). This communication technology use is consistent with a clear desire for quality interactions in any learning environment. For example, the research indicates the most successful online courses allow for increased access to the instructors and feature more democratic discussions (Swan, 2001). And, among the 10 concepts Janicki and Liegle (2001) associate with effective web-based instruction are a variety of presentation styles, clear feedback, consistent layout, clear web-based instruction, and available online help.

Despite this recognition of the importance of interaction and communication technologies to facilitate such exchanges, we know surprisingly little about how the use of specific communication technologies may influence classroom performance, key learning outcomes, and other measures of course satisfaction. Furthermore, while “The No Significant Difference Phenomenon” would suggest similarities between traditional and distance learning environments (Russell, 1999), the exact role of communication technology in classroom and dispersed settings that both make use of such tools remains unclear. The research reported here attempts to add to our knowledge about the role of communication in the technology-enhanced classroom (TEC) environment and in the technology-enhanced online (TEO) environment. We begin with a review of relevant literature leading up to our three research questions. From there we describe our research, which compares the two learning environments directly. Next we present findings, and then conclude with a discussion, limitations, and directions for continued work in this area.

**BACKGROUND**

Before we address the literature specific to our research, we are first compelled to clarify terms. One of the real challenges in this literature is the diverse vocabulary used to describe various