Chapter 22

Four Types of Interaction to Overcome Challenges of E-Learning Solutions

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ABSTRACT

Online education is growing rapidly within all levels of education. Notwithstanding this dramatic growth, research suggests that online learning curriculum designers and instructors in both developed and developing countries are unaware of the foundational theories relating to student interaction and involvement, which leads to lack of interaction and student isolation. Moreover, research suggests that course dropout rates among distance learners are significantly higher than those of traditional campus-based students, and that many educators remain unaware of the basics of how online education programs operate.

Despite these obstacles, the Ministry of Labor in Colombia (SENA) has been able to successfully implement a nationwide e-learning program aimed at raising the level of English of over 1.5 million Colombians. Using the SENA program as a case study, the authors show how the challenges described in the literature can be overcome using four types of interactions combined with innovative technological tools and effective pedagogical approaches.

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INTRODUCTION

Online education is growing rapidly at all levels of education (Allen & Seaman, 2010; US Institute of Higher Education Policy, 2000; Watson, 2007). A report published by Allen & Seaman (2010) on Web-based learning in higher education, based on responses from over 2,500 colleges and universities in the United States, reveals that institutions report record online enrollment growth on both a numeric and a percentage basis. Nearly 5.6 million students were taking at least one online course during the fall 2009 term, which is an increase of nearly one million students over the number reported in the report from the previous year. The 21% growth rate for online enrollments far exceeds the less than 2% growth of the overall higher education student population. Nearly 30% of higher education students now take at least one course online (Allen & Seaman, 2010).

Research indicates that educators and decision-makers have embraced online learning. Allen and Seaman’s (2010) annual report reveals that 63% of all reporting institutions said that online learning was a critical part of their institution’s long-term strategy. According to Rovai and Downey (2010), many universities have increased their recruiting efforts to reach a larger and more diverse audience. Some universities also extend their reach with cross-border initiatives and seek international students in order to promote enrollment growth and global learning. The economic potential of distance education and academic globalization has attracted numerous higher education providers, many of which operate on a for-profit basis (Rovai & Downey, 2010).

Online learning is growing not only in North America but also in Latin countries such as Colombia, where a growing number of universities are now offering online programs. Prestigious universities such as Javeriana (www.javeriana.edu.co) and the Open and Distance University, UNAD in Spanish (www.unad.edu.co), offer numerous academic courses in a wide range of departments and fields that can be taken online. On November 10, 2005, the Bogota Education Secretariat founded the Corporacion de Educacion Virtual (Virtual Education Corporation, www.unicolombia.edu.co), which offers more than 40 virtual programs in areas such as languages, education, finance, health and engineering.

The impact of technology and online learning on education is great. Hutti (2007) claims that technology has impacted on learning at an extraordinary pace, perhaps like no other innovation in previous years, decades, or centuries. Distance education, specifically virtual classrooms, may have a greater impact on the nature of higher education than any innovation since the invention of the printing press (Hutti, 2007).

In light of the strategic role online learning plays at all levels of education, one would expect Web-based environments to offer quality instruction. Yet research on online learning suggests that key social, pedagogical, and technical challenges have yet to be overcome (Kim & Bonk, 2006; Hara & Kling, 2001; Herbert, 2006; Robles & Braathen, 2002; Muller, et al., 2007; Watson, 2007).

Challenges in Online Learning

Although e-learning is increasingly being adopted in developed countries to reach both traditional and non-traditional students, it is still relatively unknown and unused as an educational approach in developing countries (Abdon, et al., 2007). Research suggests that the implementation of Web-based learning in both developed and developing countries has not been free of challenges and is facing a number of pedagogical, social, administrative, and technical obstacles. Four challenges are particularly serious in developing countries (Abdon, et al., 2007; Watson, 2007; Zondiros, 2009). These are: lack of interaction and student isolation, high dropout rates, lack of familiarity with e-learning methodologies and pedagogies, and technical problems. Recent research (Gomez,