Chapter 14

Effective Implementation of an Interuniversity E–Learning Initiative

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ABSTRACT

Education has expanded from the traditional in-class environment to the new digital phenomenon where teaching is assisted by Information and Communication Technologies (ICT). This wave of e-learning is challenging the effectiveness of the traditional educational approach still in place at higher education institutions. Academics and professionals agree that, to adapt higher education institutions to the 21st century, it is imperative to extend the use of ICT as well as the virtualization of many human-interaction activities. In this sense, public institutions and international reports suggest the need to deepen the application and study of e-learning within higher education as a means for achieving flexible, dynamic, and personalized e-learning initiatives. This chapter presents a case study that analyzes the implementation of a virtual interuniversity campus in which nine Spanish higher education institutions took part. For this purpose, the genesis of the project and the main characteristics of the virtual environment are described.

INTRODUCTION

Over the past decade Internet use has increased tremendously. People are continuously using the Internet to perform a wide range of tasks such as research, shopping and learning. Information and communication technologies (ICT) rapid evolution is influencing both the public and private contexts (González-Gallego, et al., 2010; Soto-Acosta et al., 2010). In this sense, the degree of development of certain domains is considered to be linked to the level of implementation of ICT (Lucio-Nieto et al., 2012). However, the adoption of ICT has followed different patterns depending on the environment. Thus, although the business context has reached high levels of ICT adoption,
other important contexts for the future of generations such as higher education remain certainly laggard in comparison (Bernard et al., 2004; Jones et al., 2010; Park, 2009; Mooij & Emeets, 2001; Tallent-Runnels et al., 2006; Teo & Noyes, 2011).

Public institutions and international reports (e.g. Institute for Higher Education Policy, 2000; European Commission, 2004; OECD, 2011) suggest the need to deepen in the application and study of e-learning within the higher education as means for achieving flexible, dynamic and personalized e-learning initiatives. More specifically, reports point out that the implementation of ICT within the higher education system is still very basic, with high levels of resources underutilization, considering its potential (OECD, 2005; UNESCO, 2011). Therefore, it is necessary to move from the use of ICT as a support tools to an e-learning instrument based on virtual environments (Guri-Rosenblit, 2005; Park, 2009). To address these issues, there is therefore a need for further works that show how to cope with problems and answer practical questions with regard to the development of higher education virtual environments (González, 2010; Ossiannilsson and Landgren, 2012).

This paper presents a case study which analyzes the implementation of the first virtual interuniversity campus in Spain, called the Shared Virtual Campus (SVC-G9), which integrates nine higher Spanish education institutions (G9). The SVC-G9 started its academic activity in 2001 with 9 courses and, today, is the largest online university campus in Spain with 79 courses offered and 6429 students. More specifically, this work analyses the project’s context, previous scenario and development, paying attention to the implementation of the whole learning process virtually. In this sense, technologies used, design, resources and course management issues such as communication, follow up and assessment are explained. Also, this case study analyses the teen-year experience of an e-business course for engineers offered simultaneously by the nine universities through the SVC-G9 platform.

The rest of our work is organized as follows. First, the next section discusses the main issues of e-learning. Second, we introduce the context in which the project is implemented. Third, the characteristics of the project and its implementation are depicted. Fourth, lessons learned from the project and the e-business course for engineers are outlined and, finally, conclusions, limitations and future research guidelines are presented.

**E-LEARNING: CONCEPT, PROCESS MANAGEMENT AND EFFECTIVNESS**

E-learning has become increasingly common in higher education institutions all over the world. The existing literature considers e-learning as an advanced pedagogy that makes use of digital technology (Nichols, 2008; Rosenberg, 2001; Tavangarian et al., 2004), and is related to the use of the Internet and other information-related ICT to create experiences that foster and support the learning process (Bose, 2003; Macgregor and Turner 2009). However, as suggested in the literature (e.g. Sabino de Freitas and Bandeira-de-Mello, 2012; Pollock & Cornford, 2003), the organization of the environment for e-learning applications goes beyond the understanding of technology from a merely instrumental and objective perspective. This view of technology encourages research on the interaction between technology and organizations, which seeks patterns across certain contexts and certain types of technology, rather than abstract, deterministic relationships, transcending settings, technologies, and intentions (Orlikowski, 1992, Wenger et al., 1999). As a result, the local context and the individual experiences and perceptions about technology must be considered when implementing e-learning technology. According to Heilesen and Josephsen (2008), e-learning involves not only rational and instrumental motives, or economic and technical aspects, but also the feelings and the framing of
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