



Learning management systems and cloud file hosting services: A study on students' acceptance



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ABSTRACT

The aim of this paper is to investigate the motivations that lead higher education students to replace several Learning Management Systems (LMS) services with cloud file hosting services for information sharing and collaboration among them. The research approach is based on the Technology Acceptance Model (TAM). More specifically, the model is devoted to identifying barriers and enablers to the acceptance of these technologies. A questionnaire comprising three factors (*Attitude toward using technology*, *Perceived ease of use* and *Perceived usefulness*) was applied to a sample consisting of 121 higher education students. Results show that the *perceived ease of use* of cloud file hosting services is above that of LMS tools and services and that cloud file hosting services presented higher levels of *perceived usefulness* than standard learning management tools. In addition, attitude toward using cloud file hosting services is well above that of using LMS tools.

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1. Introduction

Information and communication technologies (ICT) rapid evolution is influencing both the public and private contexts (Soto-Acosta, Martínez-Conesa, & Colomo-Palacios, 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, Colomo-Palacios, Soto-Acosta, Popa, & de Amescua-Seco, 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 (Park, 2009).

International reports point out that the implementation of ICT within higher education 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 efficient learning instruments (e.g. Park, 2009). To address these issues, there is therefore a need for further works that show how to cope with problems and practical issues with regard to the development of current and future ICT to support the learning process (González, 2010; Ossiannilsson & Landgren, 2012). These ICT tools support traditional and comple-

ment new forms of learning (e.g. e-learning), which make use of the Internet and other information-related ICT to create experiences that foster and support the learning process (Bose, 2003; Macgregor & Turner, 2009).

One of the main objectives of higher education in today's information technology enabled classroom is to make students more active in the learning process (Saadé, Morin, & Thomas, 2012). Among the tools available to do so are Learning Management Systems (LMS). These systems, known as Virtual Learning Environments too, present high levels of functionality regarding learning activities as well as features for course management and tracking. However, LMS still have several limitations which decrease the learning effectiveness (Yasar & Adiguzel, 2010). Most educational institutions are currently developing the non-attendance aspect with regard to much of their course material by setting up virtual campuses (Sánchez & Hueros, 2010) and LMS. The use of LMS provides students and lecturers with a set of tools for improving the learning process and its management. Nonetheless, as argued by García-Peñalvo, Conde, Alier, and Casany (2011), despite the high levels of LMS adoption, these systems have not produced the desired and expected learning outcomes yet. More specifically, these authors gathered a set of reasons to explain why the adoption of LMS have not contributed further to the learning processes, among these reasons are:

1. Tools are not properly used and often merely become spaces to publish course documents and learning materials.

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