Chapter 16

ICT Adoption Among Higher Education Teachers: A Case Study of a University in the Awareness/Exploration Stage of Blended Learning Adoption

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ABSTRACT

This chapter aims to shed light on university teachers’ adoption and use of information communication technologies (ICT) at a university in its awareness/exploration stage of blended learning adoption. The goal was to identify how teachers’ attitudes to innovation adoption influences the adoption of ICT for teaching/learning. An online survey showed substantial differences between first adopters and followers regarding the perceived importance of factors affecting ICT adoption (“financial support/stipend” and “the availability of online training for teachers”), and perceived usefulness of learning management system activities (quizzes, discussion boards, and assignments). Identifying first adopters and followers can assist universities in the awareness/exploration stage in recognizing the ways in which first adopters differ from followers and consequently help both groups to facilitate a strategic and optimal ICT adoption and implementation of blended learning.

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INTRODUCTION

It has been widely accepted that universities have to adopt the use of information and communication technologies (ICT) in their pedagogical processes if they are to remain competitive. This is particularly important for recently established universities as they have to compete with institutions with richer academic traditions. Universities try to improve students’ learning and increase access, flexibility, and cost effectiveness of their programs by implementing blended learning (Graham, Woodfield, & Harrison, 2013).

The use of blended learning in higher education is not only rapidly increasing, it is actually becoming the new norm in course delivery, as predicted by Norberg, Dziuban and Moskal (2011). In fact, blended learning, if correctly implemented, can help institutions to (Graham, Allen, & Ure, 2005): (1) enhance pedagogy, (2) increase access and flexibility, and (3) improve cost-effectiveness. Furthermore, it can also improve the teachers’ and students’ satisfaction (Graham et al., 2013). However, some negative aspects of blended learning should be acknowledged. Benson, Anderson, and Ooms (2011) noted that university teachers often find preparing for blended learning time-consuming as it requires extra administrative effort and investment of time in content development. Furthermore, they report that supporting technologies are often prone to failure. The same authors also noted the difficulties of identifying relevant teaching/learning materials due to the enormous number of resources available on the internet. In regard to time, Humbert (2007) reported issues in blended learning implementation when moving from teacher led towards a students centered learning approach. Despite these negative aspects, blended learning is becoming the standard mode of course delivery in modern universities. Hence, this chapter aims to shed light on university adoption of blended learning.

BACKGROUND

ICT Adoption Among Teachers

ICT have been regularly used in higher education teaching and learning for quite some time and blending face-to-face and computer-mediated teaching approaches is fast becoming the norm (Brown, 2016; Graham, 2018). There are substantial differences in the use of terms and definitions to name and describe blended teaching practices (Garrison & Kanuka, 2004; Oliver & Trigwell, 2005; Sharpe, Benfield, Roberts, & Francis, 2006) among different universities and individual researchers. In this chapter we will use Graham’s (2006) definition, where blended learning denotes a combination of traditional face-to-face and online instruction.

Studies have identified numerous factors that affect the adoption of ICT among university teachers. Brown’s (2016) systematic review of literature about university teachers’ adoption of blended learning identified several external and internal factors that play important roles. Among the external factors, past studies, for example, highlighted the importance of technology (e.g., availability and reliability of technological infrastructure and its ease of use), academic workload (e.g., additional time for planning and designing blended learning), the institutional environment (e.g., institutional policies and readiness to support blended learning), and students (e.g., student feedback, improved student learning). The internal factors comprised teachers’ attitudes and beliefs about teaching and learning, their past experiences and attitudes towards technology, as well as their own digital literacy.
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