

# Chapter 15

## Faculty Use and Perceptions of Web 2.0 in Higher Education

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### ABSTRACT

*In this chapter, the authors provide evidence for the potential of various Web 2.0 applications in higher education through a review of relevant literature on both emerging educational technologies and social networking. Additionally, the authors report the results and implications of a study exploring faculty awareness of the potential of Web 2.0 technologies (blogs, wikis, social bookmarks, social networks, instant messaging, internet telephony, and audio/video conferencing) to support and supplement classroom instruction in higher education. Also, using the Decomposed Theory of Planned Behavior as the theoretical foundation, the authors discuss factors that influence faculty decisions to adopt specific Web 2.0 technologies. The chapter concludes with a discussion of the implications of the study and recommendations for future research.*

### INTRODUCTION

In recent years, the design and delivery of courses in colleges and universities has been significantly influenced by the immersion of technology into numerous facets of society. For example, the emergence of technologies such as e-mail and learning management systems has resulted in new ways in which content is accessed, shared, and delivered

throughout a traditional course (Barnett, Keating, Harwood, & Saam, 2004). More recently, Web 2.0 applications have emerged with the potential to further enhance the teaching and learning environment in higher education. Contrary to past models of using Internet technologies as a method of accessing course-related information, students can now use various Internet technologies to connect and share with others. Rather than being passive recipients of content and information, students can become actively involved with accessing and connecting

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information from multiple sources and creating new, sharable knowledge through social interactions (Maloney, 2007).

Are these Web 2.0 technologies beneficial to learning? A number of recent publications have cited ways in which Web 2.0 applications enhance teaching and learning (Alexander, 2006; Franklin & Van Harmelen, 2007). From the current body of research related to the use of Web 2.0 in teaching and learning, we do know that these technologies have many affordances to improve teaching and learning. These affordances include the ability to support scaffolding and active learner participation, provide opportunities for student publication, feedback, and reflection, and the potential for development of a community of learners (Ferdig, 2007). However, while students today are immersed in a culture of cell phones, text messaging, YouTube, wikis, social networks, and other Web 2.0 applications, many faculty still have not made the switch to these emerging technologies and often use course websites and e-mail as their predominant means of connecting with their students (Maloney, 2007). Are faculty members missing out on the opportunity to improve student achievement and better connect with their students by not utilizing the Web 2.0 tools available today? What are faculty perceptions of the role and benefits of Web 2.0 technologies to supplement teaching and learning?

The purpose of this chapter is to assess faculty awareness of the potential of Web 2.0 technologies to supplement classroom learning and to assess faculty adoption of such technologies using the Decomposed Theory of Planned Behavior as the theoretical foundation (Taylor & Todd, 1995). In this chapter, the authors will report about the evidence for the potential of Web 2.0 applications in higher education by providing a review of the relevant literature from the fields of educational technology and learning theory, focusing on the pedagogical potential of Web 2.0 applications in higher education. Additionally, this chapter will discuss the results of a study assessing faculty

awareness of the pedagogical benefits of Web 2.0 tools and factors that influence faculty decisions to adopt these tools. This discussion will include a brief overview of the theoretical framework (Decomposed Theory of Planned Behavior), methodology, data analysis and key findings of the study, implications of study results, as well as recommendations to faculty and university administrators concerning the use of Web 2.0 in higher education.

We are just now at the cusp of researching the potential of Web 2.0 to improve the teaching and learning in higher education. This chapter reports on some of the early research of Web 2.0 in higher education, the results of some emerging research on Web 2.0 applications in higher education, and is a call to further investigate the use of Web 2.0 applications in higher education, both today and in the future.

## **REVIEW OF THE LITERATURE**

By changing the manner in which data, information, and documents are created, manipulated, and distributed, Web 2.0 applications provide users with opportunities to take control of their own content, as well as afford users opportunities to interact with services and share content with other users and participants (Madden & Fox, 2006; Maloney, 2007). While these new tools are not a new idea, they do provide a new openness, which has changed the way we do things. These new technologies are emerging in many facets of society and make sharing vast amounts of content among users and participants much easier and much more frequent than in the past. In the past few years, tools such as Skype (a popular Internet telephony application), Facebook (an online social network), Flickr (an online photo sharing tool), and YouTube (an online video sharing tool), have afforded users around the world numerous new methods of exchanging personal information, photos and videos, as well as promoting a con-

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