

Chapter 17

Implementing E-Learning in University 2.0: Are Universities Ready for the Digital Age?

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ABSTRACT

Because of the ways students learn and make sense of world change, higher education institutions try to re-conceptualize this change process and search for better approaches to respond to the demands of the information age. This chapter will address current transformation specifically occurring in e-Learning environments through emerging technologies and discuss new approaches to teaching and learning so the future of education can be better grasped. The chapter will also provide a list of suggestions so adoption of new technologies as well as e-Learning strategies will be more effective in Universities 2.0.

INTRODUCTION

As the learning process changes by sharing knowledge, socially interacting with others and constructing meaning through new information networks, higher education institutions change as well to better function in the digital age. To some, this change is because of technological advancements, but Weller (2008) asserts that “it runs deeper than this. If we add to the technological experience, the user participation one they will have had through social tools such as Flickr, YouTube, blogging, wikis, etc. and compare this with the top-down,

pre-filtered experience they have in courses and selected resources, it becomes obvious that this is about more than just technology, it is a social change” (para. 3). Moreover, traditional teaching and learning environments are “presentation-driven; information is delivered and tested. This approach prepares students for jobs that require simply following directions and rote skills. The new ways is collaborative, with information shared, discussed, refined with others, and understood deeply” (Solomon & Schrum, 2007, p. 21). Armentano (2007) argues that “as the world moves toward a global economy and information can be accessed from anywhere in the world, universities need to think more critically about how they want to proceed

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in developing leaders of this brave new digital age” (para. 3). It is not clear, however, if today’s universities are ready for future learners who are willing to be participants of information revolution or for future faculty members who would like to prepare their students with the 21st century skills using new approaches to teaching and learning. Moreover, the biggest challenge “that we now face is figuring out how to incorporate the paradigm-altering technologies of Web 2.0 into teaching and learning” (Maloney, 2007, B26).

BACKGROUND

Web 2.0

Web 2.0 technologies refer to “changing trends in the use of World Wide Web technology and web design that aims to enhance creativity, information sharing, and, most notably, collaboration among users” (Wikipedia, 2008, para. 1). This term was coined at O’Reilly Media’s 2004 Web 2.0 Conference and opened up development of new tools where users are connected and interactive through information networks. (The go2web20 Web site at <http://www.go2web20.net> provides a complete list of Web 2.0 tools). However, what made Web 2.0 different than Web 1.0 was the transformation in the Read-Write-Web concept. Tim Berners-Lee, the individual responsible for creating the Web, envisioned that the Web needed to be writeable, not just readable. This goal has been achieved only a decade later with tools such as blogs, wikis, social networking sites and media sharing tools that enabled users to participate in online communities and actively be part of information networks. According to Downes (2004) “what was happening was that the Web was shifting from being a medium, in which information was transmitted and consumed, into being a platform, in which content was created, shared, remixed, repurposed, and passed along” (para. 21).

Furthermore, the static web sites (Web 1.0) emphasized less interaction with users and difficulty with modification due to hierarchically structured pages. Conversely, blogs and wikis (Web 2.0) enabled individual posts, content chunks, chronological ordering and easy modification of content. This shift created a new concept called ‘microcontent’ that “can be saved, summarized, addressed, copied, quoted, and built into new projects. Browsers respond to the boom in microcontent with bookmarklets in toolbars, letting users fling something from one page into a Web service that yields up another page” (Alexander, 2006, para. 4).

While numerous authors discuss the characteristics of Web 2.0, two individuals’ works are often referenced. O’Reilly (2005), in his seminal article called *What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software*, discussed seven principles of Web 2.0 for businesses. Anderson (2007) adapted these principles to higher education and listed them as: individual production and user generated content; harnessing the power of the crowd; data on an epic scale; architecture of participation; and network effects and openness.

Most of Web 2.0 tools are Free/Libre and Open Source (FLOSS). FLOSS refers to software programs that are open for anyone to use. Two special licenses, Creative Commons (CC) and General Public Licenses (GNU) allow content creators to grant their copyrights to the public, so their products can be used, modified, and distributed freely. CC was founded in 2001 because “copyright durations were repeatedly extended in large part due to the pressures from the media industry. They use private rights to create public goods: creative works set free for certain uses. Like the free software and open-source movements, their ends are cooperative and community-minded, but the means are voluntary and libertarian” (Atkins, Brown & Hammond, 2007, p. 14). GNU license is very similar to CC, ensuring that freedoms are

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