

# Chapter 51

## The Use of Web 2.0 Technologies in Formal and Informal Learning Settings

**Lisa A. Best**

*University of New Brunswick, Canada*

**Katherine McGuire**

*University of New Brunswick, Canada*

**Diane N. Buhay**

*University of New Brunswick, Canada*

**Signe Gurholt**

*New Brunswick Community College, Canada*

**Shari Foley**

*Bayside Middle School, Canada*

### ABSTRACT

*It is often assumed that because the current generation of students is more technologically competent than previous generations, they would prefer to use technology for both formal and informal learning. The results of a series of empirical studies indicated that students in formal settings preferred face-to-face contact with their instructors and used Web 2.0 tools for communication and to complete specific class assignments; in their personal lives, these technologies were used for communication, music and video downloads, and online gaming. Although students did not use social networking in their classes, the use of these tools may provide educators with an alternative to course management systems. Results from a community sample indicated a preference towards using the Internet for information gathering, and even though respondents reported that the incorporation of social networking sites in informal education settings would be nice, it was not expected. Overall, both student and community participants utilized technology that was familiar to them. Thus, assuming technological competence in our students and implementing various technological applications in the classroom may be counterproductive if guidance and training are not provided.*

### TECHNOLOGICAL TOOLS IN EDUCATION: INTRODUCTION

Web 2.0 is a set of second generation web-based technologies and services that are often designed so that users can easily share information. Although

the term “Web 2.0 Technology” is used in many ways, most researchers agree that this technology include blogs, podcasts, wikis, social networking sites (i.e., Facebook, MySpace) social bookmarking sites (i.e., Diigo), and file sharing sites (i.e., Dropbox). The advent of these technologies has

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meant that modern consumers of information are not simply information gatherers but are able to produce and create content and go on to use and share their creations (Kennedy et al., 2007).

The widespread use of these technologies has led researchers to examine the feasibility of using social networking sites to convey educational information. The use of social networking is becoming more and more prevalent and, according to Facebook newsroom (4 October 2012), as of 14 September 2012, there were 1,000,000,000 Facebook users. Even more staggering is the fact that Facebook reports 1.4 billion friend connections and 219 billion uploaded photographs. In 2007, the number of Facebook users hit 50 million and the median age of new users was 26 years. The age of new users has decreased steadily and, currently, the median age of a new user is 22 years. According to the Global Information Technology Report (Bold & Davidson, 2012), Facebook users who access such sites through a mobile device are more active users. Furthermore according to this report, it is predicted that by 2015, smart phones will be more commonly used than personal computers thus, more and more people are expected to use their handheld device for information gathering and sharing as well as content creation.

Given the popularity of social networking sites, the increased availability of smart devices, and the decreasing age of new users, Facebook (and other social networking tools) should be more fully explored in all types of learning environments. Several researchers have reported that Facebook is a useful tool to help students connect socially (i. e., Madge, Meek, Wellens, & Hooley, 2009) and others have found that the site affords informal learning opportunities (Selwyn, 2007; Wodzicki, Schwämmlein, & Moskaliuk, 2011) and the opportunity for reflection (Mason, 2006). In spite of these possibilities, Madge et al. (2006) reported that 43% of students did not want Facebook incorporated into their university courses and many did not want their instructors

to contact them using Facebook. Of the students who wanted to see Facebook used by instructors, the majority reported that the tool could be useful to convey information and for student to students connections.

## **Technology in the Classroom**

During the 1980's and 1990's, the use of personal computers, video gaming, the internet, and cell phones became increasingly common. These advances led to a technology explosion and children born during this period were exposed to various types of technology from a very young age. Children born between 1980 and 1999 are sometimes called digital natives (Prensky, 2001) and it is often assumed that students of this generation are more technologically competent than members of previous generations. Knowledge and experience with technological tools is sometimes referred to as a *new literacy* (Coiro, Knobel, Lankshear, & Leueds, 2008), *multiliteracy* (Cope & Kalantzis, 2000), or a *21st century skill* (Bellanca & Brandt, 2010). Given this focus on the prevalence of technological applications and the descriptors used to define modern students, it is important to examine whether students have embraced these skills. Although there is a preponderance of information suggesting that students want technology to be used in learning environments, it is critical to fully examine the efficacy of these technologies before embracing them across the board.

Kvavik (2005) evaluated the technology use and competency of 4374 undergraduate students from 13 universities and found that students indicated only a moderate preference for information technologies in the classroom. Although Kvavik expected that students entering university would be competent in a wide variety of technological tools, he found that first year university students had to be taught specific technology skills. Furthermore, for students to internalize literacy, specific skills had to be linked to curriculum requirements.

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