Chapter 7
Cloud-Based Social Media as LMS:
A Fit for STEM in Developing and Newly Developed Economies

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ABSTRACT

Social media, with its ubiquitous characteristics and availability for use throughout the world, may serve as a replacement for many features typically associated with learning management systems (LMS). These systems are generally free to use, rely on robust servers with high speed connections, and are already widely used on mobile phones and other devices, unlike learning management systems, which are typically used for the duration of educational experience and then no longer available to students. Due to low budgets available for IT, universities in developing and newly developed countries may consider alternatives to the LMS, which is both expensive, and relies either on paid services or the provisioning of servers. Educators should consider potential negative aspects and positive aspects of the use of these tools in higher education before adopting for widespread use. STEM learning may be especially enhanced through the use of social networking services (SNS) as LMS.

INTRODUCTION

The epistemology of digital education started and was conceptualized when the Internet was introduced in the late 1990s as a tool for higher education and evolves to teaching with digital technologies. According to an article from the Victoria Department of Education and Training (n.d.), digital technologies are the electronic tools, hardware and software devices that can store, process, and generate an output such as multimedia, applications, authoring tools, and online systems that can be used in teaching by using desktop computers, laptops, notebooks, and

mobile devices. The use of digital technologies has been well received, and in many cases, shows positive learning outcomes at the same level or exceeding those by more traditional pedagogies. Indeed, there is a need to carefully consider the use of new or changing technologies; Higgins, Xia, and Katsipataki (2012) emphasize that "it is not whether technology is used (or not) which makes the difference, but how well the technology is used to support teaching and learning" (p. 3). New generations of learners get motivated and are more engaged through the use of digital technologies in education. Educators need to experiment and try out the use of tools, including social networks, to enhance the quality of education and motivate students (Klopfer, Osterweil, Groff, & Haas, 2009).

BACKGROUND

As a platform, Facebook was started as a college-student-only social networking service in 2004. As of the last report in September 2014, Facebook had over 1.35 billion active users monthly (Facebook, n.d.). Facebook is an online application comprising a social network. Individuals use Facebook for multiple purposes, including instantaneous communication, delayed communication through an e-mail-like system, the sharing of pictures, developing of networks of "friends", and the use of closed and open group spaces. Communication can be developed in ways that are open to other users in the user's network of friends, to everyone who might view the user's profile page, to a closed or open group, or to an individual privately. Newly added features include video and audio conferencing between users. Facebook can be integrated with personal computers, mobile phones, and tablet devices—thus being persistent and constantly a part of the user's daily activities, as long as appropriate connectivity to the Internet is maintained. The flexibility of the feature set, along with no charge for use, has resulted in rapid

proliferation of Facebook into the fabric of the user's online social experiences. What is unique about Facebook is the ability for users to visualize their connections with others, with the platform even suggesting others you may want to "friend"[1], which include those users with many of the same "friends" (boyd & Ellison, 2007).

As a cloud-based platform, users access many of Facebook's features through standard web browsers, moving toward a Software-as-a-Service (SaaS) model (Hassan, 2011). Provided the proliferation of features that are useful to the exchange of information, files, and photos, Facebook has begun to resemble a unified communications platform, with uses in business, education, and social lives (Riemer & Taing, 2009). Indeed, the blurring of the boundaries between uses in business, education, and social lives, has reflected the changes to social life as a result of the use of Internet-based communications, being "always on". Facebook lives in contrast to traditional learning management systems (LMSs).

The usefulness of Facebook goes beyond maintaining social networks of friends in the same physical area. The authors of this chapter met at an academic conference in the Philippines about a month after Typhoon Haiyan/Typhon Yolanda had devastated part of the Philippines. Author 1, Matthew Eichler, an American faculty member and scholar has presented at several conferences in the Republic of the Philippines. As a faculty member in a mostly-online program at a traditional university in Texas, the first author spends much time "on the Internet", answering questions, updating courses, creating audio-visual content, electronically marking student assignments, and conducting research. In addition, he advises and coordinates the masters' degree programs in his department, doing much of his advising online via teleconferencing and E-mail systems. Author 2, Las Johansen, had lived through the surge of Typhoon Haiyan/Typhoo Yolanda[2] of November 2013, which destroyed much of Tacloban City, a large city and commercial center in the Eastern

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