

# Chapter 1

## Web 2.0 Technologies in E-Learning

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### ABSTRACT

*Web 2.0 is the second face of World Wide Web with its revolutionary features and technologies. Web 2.0 takes users to a dynamic environment, where they can build or control more personal, social and flexible web contents. These functions attract educators' attention and enable them to use Web 2.0 technologies in E-Learning activities. As a result of using Web 2.0 technologies, a new generation learning form: E-Learning 2.0 comes to life. This chapter will discuss the roles of Web 2.0 in E-Learning, analyze free and open source E-Learning 2.0 applications, and discuss the future of the Web. The features of Web 2.0 and its popular technologies will be explained first. Later, the roles of Web 2.0 technologies in E-Learning activities and E-Learning 2.0 will be discussed. Following that, free and open source E-Learning 2.0 applications will be analyzed. At last, new generations within the future, Web 3.0 and Web 4.0 will be discussed.*

### INTRODUCTION

Ways of using the World Wide Web personally and professionally are rapidly changing with the advanced web technologies in recent years. These technologies transform the classical Web into an interactive, dynamic platform and form a new trend in web developing and web designing. Thus, computer users find themselves in a new genera-

tion of the Web. The term “Web 2.0” is used to define this new form of the digital world. Today, the popularity of Web 2.0 and the development of new web applications continue to improve at a rapid rate.

There are many sophisticated Web 2.0 applications that provide collaborative working or social networking platforms for computer users. Web 2.0 technologies also can be used to create personal and interactive technologies or applications. Blogs, wikis, file sharing sites and podcast-

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ing applications are some of Web 2.0 applications that are used all over the world. These applications can be used in different areas to achieve better working standards.

In the last few years, one of the most effective, but least hyped, uses of Web 2.0 technologies is E-Learning (MacManus, 2007). Education activities can be performed easily and efficiently with Web 2.0. Teachers and students embrace some Web 2.0 technologies such as blogging and podcasting. Although not designed specifically for use in education activities, these technologies help teachers and students make E-Learning far more personal, social, and flexible (MacManus, 2007). A new term: “E-Learning 2.0” is used to refer to new ways of thinking about E-Learning activities inspired by the emergence of Web 2.0 (Downes, 2005).

In this chapter, Web 2.0 technologies, their use in E-Learning activities and the free open source applications that are used for educational activities in E-Learning 2.0 will be discussed. The objectives of the chapter are:

- To discuss how Web 2.0 technologies can be incorporated into E-Learning activities.
- To discuss E-Learning 2.0, which is a new form of E-Learning.
- Analyzing some free and open source applications that are used in E-Learning 2.0.
- To discuss the future of Web technologies (Web 3.0 and Web 4.0) in E-Learning activities.

## NEW GENERATION OF WWW: WEB 2.0

Web 2.0 is an innovative technology that provides a novel way of learning to the old web platform. It has been defined as the second generation of the World Wide Web. It is important to explain what the terms Web 2.0 and Web 2.0 technologies mean before getting more detailed information on

Web 2.0, and discussing its use in the E-Learning environment.

### What is Web 2.0?

Web 2.0 is a word coined and used in an article titled “Fragmented Future” by Darcy DiNucci (1999). Later, it was also used by Tim O’Reilly at O’Reilly Media conference, in 2004 (O’Reilly, 2005; Graham, 2005). Now, the term is mostly associated with Tim O’Reilly. Web 2.0 refers to a new trend after standard web. It is also defined as the second generation of web development and web design (Krish, 2009). One way of explaining the change to Web 2.0 is comparing Web 2.0 with Web 1.0. Web 1.0 is a term that is used to specify the state of the World Wide Web that was used before Web 2.0. In Web 1.0, a few authors were providing content for a wide audience of relatively passive readers. But with Web 2.0, the web is considered to be a platform to generate, re-purpose, and consume shared content. With Web 2.0 technologies, the web also becomes a platform for social networking that enables groups of users to socialize, collaborate, and work with each other. This function is mostly based on existing web data-sharing mechanisms being used to share content, in conjunction with the use of web protocol based interfaces to web applications that

Figure 1. Web 1.0 and Web 2.0



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