Chapter 7
The Use of Web 2.0 Technologies in the ESL Classroom

Melissa Wright
University of Southern Mississippi, USA

Lilian H. Hill
University of Southern Mississippi, USA

ABSTRACT
This chapter includes a brief history of the Internet, definitions of Web 2.0 and characterization of its social nature, identification and descriptions of the various Web 2.0 technologies, applications of sociocultural perspectives to language learning, the benefits of using Web 2.0 in the English as a Second Language (ESL) classroom, ways in which Web 2.0 has been used successfully in various academic settings, and specific activities for using Web 2.0 in ESL instruction. It is imperative that ESL instructors become familiar with internet technologies and ways they can be used to enhance the educational experiences of their students. The more familiar students are with Web 2.0 technologies, the better prepared they will be for their future educational and occupational endeavors.

INTRODUCTION
Computer users are now able to produce websites, comment or edit the work of others online, and post videos and audio recordings with relative ease through Web 2.0 technologies such as blogs, wikis, and Facebook. These technologies are beginning to be incorporated more and more often into the learning environment because they allow learners to interact with each other and work collaboratively. The interactivity and collaborative work that can be done using Web 2.0 technologies can be especially beneficial for English as a second (or other) language learners because they will be required to use their English in natural settings with both native and non-native speakers. This chapter includes a brief history of the Internet, definitions of Web 2.0 and characterization of its social nature, identification and descriptions of the various Web 2.0 technologies, applications of sociocultural perspectives to language learning, the benefits of using Web 2.0 in the English as a Second Language (ESL) classroom, ways in which Web 2.0 has been used successfully in
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various academic settings, and specific activities for using Web 2.0 in ESL instruction.

BACKGROUND

After World War II, the climate in the United States was one of fear that the country would be attacked by Russia. During the Cold War era, the fear of being attacked became even more prevalent. As a result, the Advanced Research Projects Agency (ARPA) of the Pentagon began to develop a way for different computers within the government to communicate with each other if the country was attacked and/or if one of the computers was destroyed due to an attack. The result was the ARPAnet, which became available in 1969 and was the precursor of the modern day Internet. There were four computer sites: University of California Los Angeles, University of California, University of Utah, and Stanford University. By 1972, there were 37 sites or nodes in the ARPAnet, which consisted predominantly of universities and government research facilities. The first public demonstration of e-mail took place on ARPAnet in 1972. To have access to the ARPAnet, institutions had to be involved in a Department of Defense-related research project. However, by the 1980s, many other organizations wanted to have access to the ARPAnet. Therefore, in 1986, the National Science Foundation developed a high-speed successor to the ARPAnet, the NSFnet (Welsh, 2007a).

The NSFnet opened up access to its five regional supercomputing centers and usage became more and more widespread. While the ARPAnet was originally one network, Vinton Cerf, known as the father of the Internet, began to create a network of networks, which he referred to as the “inter-netting project.” The system of networks which emerged from his research became known as the Internet. The original ARPAnet was shut down in 1990, while the National Science Foundation began to sell pieces of the original NSFnet to major telecommunications companies between 1990 and 1994. This allowed the Internet to become accessible to anyone with a computer (Welsh, 2007a).

Two of the earliest Internet applications, e-mail and telnetting, did not allow graphics and multimedia. However, in 1990, Tim Berners-Lee, who worked at CERN in Geneva, Switzerland, developed the World Wide Web part of the Internet, which allowed for the use of graphics, multimedia, and hypertext, or interactive links, on the Internet. He and his associates at CERN developed both hypertext markup language (html), the language which could create webpages with graphics and multimedia, and browsers (Internet Explorer or Netscape), which allowed graphics and hypertext to be displayed on a computer screen meant for text-only (Welsh, 2007b).

The first generation of the World Wide Web and the Internet may be referred to as Web 1.0. Web 1.0 was known as “static,” meaning that there was little opportunity for user interaction. Generally, users could not edit or add to content on websites. It is commonly called the “read-only” version of the Internet. The term “Web 2.0” was first used in 2004 by Dale Dougherty of O’Reilly Media, Inc., a company which produces books and other media related to technology (Bonk, 2009; O’Reilly, 2005). Web 2.0 refers to the use of technologies which facilitate user-centered works, interaction, and collaboration between different people or groups of people. Common Web 2.0 technologies include the following: web-logs (blogs); wikis; podcasts; (Anderson, 2007); Twitter; and social networking sites such as Facebook and My Space.

WEB 2.0 TECHNOLOGIES AND PEDAGOGY

Internet technologies classified under the umbrella Web 2.0 have been described as profoundly social (Anderson, 2007), and are known for their connectivity, openness to modification by multiple users, collaboration, social networking, and the use of microcontent that can be manipulated in