

Teaching with an Ever-Spinning Web: Instructional Uses of Web 2.0

by John Teahan

In little more than a decade, the Web has become an essential medium for information, entertainment, and commerce, making its adoption among consumers quicker than any other medium before it. The majority of American classrooms have become connected to the Internet in the same short time span. Previously, science or mathematics students might have had access to only a few dozen images in a printed textbook; now, thanks to the Web, they have access to hundreds of thousands of images illustrating almost any conceivable topic.

Likewise, teachers now face a new generation of robust web-based applications conducive to classroom use. With a wealth of resources categorized as “Web 2.0,” search-weary teachers are increasingly challenged to mine the instructional gold within the fast-moving river of social networking tools. Coined by book publisher Tim O’Reilly, the term “Web 2.0” refers to a second generation of services available on the World Wide Web that allows groups of users to share information and collaborate online. Blogs and wikis have been two breakout applications in the pop cultural landscape, but other tools have inherent utility for instruction. This article will consider two such applications – Del.icio.us and Flickr – in terms of their practicality and the unique ways they can enable today’s teachers.

The open-ended nature of these applications and their use of free-flowing *microcontent* (blocks of content that can be saved, summarized, addressed, copied, and built into new projects) are two qualities that have driven their popularity (Alexander, 2006).

Another advantage is the virtual field testing that these resources undergo from other users worldwide. James Surowiecki’s (2004) book, *The Wisdom of Crowds: Why the Many Are Smarter Than the Few*

and How Collective Wisdom Shapes Business, Economies, Societies and Nations, suggests that information aggregated by groups often results in decisions superior to ones made by individuals equipped with the same information. This collective intelligence ensures that queries have a level of quality control.

Del.icio.us and Flickr feature all of the characteristics described above, making them relevant and valuable for teachers and students. Both are freely available over the Web and offer a variety of opportunities for classroom integration.

Del.icio.us (<http://del.icio.us>)

Social bookmarking web sites (sites in which bookmarked resources are organized by preference and shared) have become a popular means to store, classify, and search links through the Internet (Bull, 2006). The del.icio.us bookmarking tool hinges on the premise that if a significant number of likeminded individuals find a resource useful, you might, too. Being a web-based tool, it is possible to compile a list of the resources that are accessed most often and “tagged” by category. For example, search the del.icio.us database of popular items tagged with “Law of cosines” or “kinetic energy” and you will generate a list of the most useful sites for those topics as ranked by other users.

One classroom strategy using del.icio.us involves collaboration through use of a tag agreed upon by individuals in a specific group. Students in a Trigonometry class at Tech High School, for example, could collectively bookmark resources with TrigTechHS. This would allow everyone else in the class to search on these resources by using that tag. Over time, an entire class or groups within the class could solve proofs together and have their work fully

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documented and searchable on the Web. The web-based nature of the application allows access to the work-in-progress through any live Internet connection—no special software or downloads are necessary, giving students universal access to the shared work.

Flickr (<http://www.flickr.com>)

Flickr is a photo sharing site with an online community platform that has grown into a shared repository of thousands of photo images. Its popularity has been fueled by its innovative online community tools that allow photos to be tagged and browsed by category. Until recently, the resources and facilities for incorporating images into classroom teaching have been limited to low-resolution overhead transparencies and slides. The digital photography boom has vastly improved the resolution of images, but finding topic-specific pictures had always been a hit or miss prospect using a general search engine.



Photograph of a lunar eclipse acquired from Flickr.

Flickr provides readily available photos depicting different aspects of mathematics and science. Tagging similar to that found in del.icio.us makes it possible for classes or teams to tag groups of photos illustrating lab assignments or fieldwork.

As a resource, Flickr provides many opportunities for observation activities in science. Within an astronomy unit, for example, the teacher can ask a class to compare images of lunar and solar eclipses found in *Flickr's* directory. A discussion

can follow about which images best represent each specific phenomenon. The selected images can be tagged specifically for the class. The last part of the lesson can involve students writing a descriptive paragraph and a detailed diagram on how solar and lunar eclipses differ.

Although the prospect of fully embracing any technology trend can be daunting, the ubiquity and interactive nature of Web 2.0 allows teachers to become familiar with it using personal interests outside the classroom before committing to implementation in professional settings. Once familiar with the characteristics of the Web 2.0 environment, teachers can adapt available tools for specific units and lessons, getting a foothold in this exciting development in Internet technology.

References

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