What is Web 2.0?

Web 2.0 is a buzzword that has generated an enormous amount of attention and hype over the last few years. Here are some popular definitions:

- the next dot.com bubble;
- “the network as platform, spanning all connected devices” (Tim O'Reilly, http://radar.oreilly.com/archives/2005/10/web_20_compact_definition.html);
- a way for all users of websites to contribute to creating content in a collaborative way;
- users networking and interacting, and building their own networks of people and resources through easy-to-use social networking services.

The last two definitions are probably the most valuable for considering web 2.0 tools and services in the context of professional development, and they are best illustrated by examples. The four most notable tools for collaborating in developing content are wikis, RSS, blogging and social bookmarking.

Wikis

A wiki is a website that enables any user with the right permissions to add, edit, comment on or even remove content. The most famous wiki is Wikipedia, while Qwiki (http://qwiki.caltech.edu/wiki/Main_Page) is a quantum physics wiki hosted by the University of California.

RSS

RSS (really simple syndication) is an internet standard that allows the same content to be syndicated across a number of sites as feeds and aggregated using RSS readers (see below). Typically, headlines and either a summary or the whole of each individual item of content will appear. Generally speaking, all major news sites, blogs and other sites featuring frequently updated content can be read via their RSS feeds. Feeds are accessed using a reader, such as Bloglines (www.bloglines.com). A list of good starting points for finding useful feeds is given at the end of this helpsheet. Google Reader (www.google.com/reader) is a popular RSS feed reader.
Blogs

Blogs are a form of online diary or journal where, with the permission of the owner, anyone can add comments about the content that they read. Blogs also contain links to each other and comments on what has been written on other websites or blogs, forming a powerful network of information and commentary that includes literally millions of sites on every conceivable subject.

A good site for starting to explore blogs is Technorati Search (www.technorati.com/search), which weights each blog according to authority or the number of times that other bloggers have linked to it.

Physics-related blogs with high Technorati Search ratings include Uncertainty Principles (the personal blog of a physicist, http://scienceblogs.com/principles) and Cosmic Variance (which has a useful page of links to other physics blogs, http://cosmicvariance.com/links/).

Social bookmarking and social networks

Social bookmarking sites or services provide a means of accessing your web bookmarks (tags) from any computer and sharing them with others. Through looking at the bookmarks highlighted by other users you can discover additional content or research that you might otherwise have failed to find.

Sites such as Del.icio.us (http://del.icio.us), Digg (www.digg.com) and Ma.gnolia (http://ma.gnolia.com/) enable you to bookmark an interesting site or information resource, see what other users thought of it and find similar sites bookmarked as useful by people with a set of interests similar to your own.

The results for a search on the “physics” tag on Del.icio.us:

How is this different from a normal search engine or an old-fashioned web directory? First, users of social bookmarking sites generally focus on their specific field of interest and highlight sites that are personally useful in that context. Second, rather than the mainstream sites, they will tend to note more specialised or little-known sources of information. Third, the “signal to noise” ratio is often better – that is, there is more useful content than noise. Google and other search engines should, however, remain your first port of call for highly specific searches. Social bookmarking sites are most useful for browsing or exploring a topic when you feel that you have already mined all of the standard resources.

These social bookmarking sites are online communities formed with the purpose of sharing information. Social networking sites, such as Facebook and LinkedIn, exist solely for the purpose of making connections with other people.
How can this be useful for professional development?

As we have seen, the major shift between the traditional web (or Web 1.0) and Web 2.0 is in the capacity that Web 2.0 offers for dialogue. Web 1.0 enabled dynamic networks of information. Web 2.0 mediates dynamic networks of people and conversations. This means that many traditional means of professional development – mentoring, networking, learning and study, etc. – can be carried out or delivered online, often in a radically transformed fashion.

Mentoring and professional support networks

The traditional model of mentoring or coaching involves a one-to-one relationship, generally between a more experienced or older mentor and someone less professionally established. This can take place in an institutional context, either through informal links or via formal schemes. The goal is ideally personal and professional development on both sides.

Research suggests that, while such relationships can be highly successful, informally established mentoring is often more successful than institutionally sponsored relationships. Additionally, many people have found that having a number of mentors who provide support in different contexts and with differing levels of intensity suits them better. Recent research has also established the importance of informal professional support from peers.
Using web 2.0 for professional networking

Social networking
Professionally orientated social networking sites, such as LinkedIn (www.linkedin.com), provide an alternative approach to reaching out to and communicating with a community. LinkedIn operates in such a way that connecting to people you know makes their connections available to you and so on, following the principles of six degrees of separation (http://en.wikipedia.org/wiki/Six_degrees_of_separation). Members can ask their networks questions, search for work or offer work themselves. In many ways, LinkedIn operates as a live contacts database, providing a means of keeping a constantly updated version of your CV and achievements in front of the eyes of your peers.

However, it is important to realise that, as with offline relationships, it is the quality of the connections that you form within LinkedIn rather than the quantity that counts. When inviting people to connect with you on social networking sites, try to build connections with people whom you know or who have a tangible link to you, perhaps through having attended the same university or having worked at the same institution. An article in Fast Company (http://tinyurl.com/239z4e) recommends:

- only invite those you know well;
- only invite those you trust;
- only invite those you want to forward things to.

A year ago, Facebook’s (www.facebook.com) focus was very much on networking among graduates. However, a much broader user demographic is now migrating to Facebook, and many major institutions and companies are establishing Facebook presences. While Facebook supports the “viral” model of networking delivered by LinkedIn, it also provides a supporting infrastructure of regional networks (e.g. London, Australia and Colorado) and groups. Any member can set up a Facebook group and define its area of interest. Additionally – and this could be seen as being as much a disadvantage as an advantage – any member can invite or (in Facebook parlance) “befriend” another member, whereas sending invitations in LinkedIn is strictly confined to individuals within three degrees.

Getting the most out of social networking sites requires you to pay careful attention to what information you choose to publish about yourself. Information on LinkedIn can be viewed via a public profile. While you can customise the extent to which your profile is visible, you’re still making information about yourself public. Similarly, any information that you post on Facebook can be seen by people whom you accept as “friends”. In many ways, it is safest to assume that everything you post on sites such as LinkedIn and Facebook is public and to edit it yourself accordingly.

To summarise, social networking sites offer a means of maintaining contact with associates and colleagues, creating new and valuable professional relationships and (properly managed) establishing a professional profile that increases your social capital as a networking node in your own right.

Blogs
Blogs provide a different kind of professional support network. Consider starting your own blog (www.wordpress.com is a popular platform used by more than a million bloggers) but be aware that, while blogging can be a highly successful way of establishing a professional profile, it requires a considerable amount of work and commitment. Blog about things that interest and excite you but, most important, read and comment on and link to other bloggers working in the same area. Sean Carroll’s blog (http://preposterousuniverse.blogspot.com/) is an excellent example of this kind of project. See also articles on the Institute’s Physics World community website (http://physicsworld.com/cws/article/print/26708 and http://physicsworld.com/cws/article/print/24088).

Blogs are also increasingly popular as a means of organisations reaching out to their audiences, and communicating more informally and freely internally. An example is the Institute’s Potential Energy blog (http://potentialenergy.iop.org/), which ran for 10 weeks last year. Taking part in or helping to establish this kind of activity increases your engagement with your workplace and positions you as an enabler and facilitator.
Learning and study

Academic resources, such as Athens, or virtual learning environments, such as Blackboard or Moodle, have been in existence in one form or another for nearly 15 years. However, the greater openness of data resources combined with improved common standards for access to data has enabled a much more flexible degree of access to academic resources and has put pressure on the arguably rigid model of distance learning represented by VLE to operate in a more community oriented and interactive fashion.

The Institute runs eprintweb.org (http://eprintweb.org/S/), a searchable archive of physics articles based on Cornell’s arXiv.org. What makes this especially useful is the provision of RSS feeds for each subject area. Google Scholar (http://scholar.google.com) provides an open way to search across many different academic libraries and resources, and it can prove useful as a counterpoint to more formal sources.

Wikis are an invaluable collaborative tool and, while the most recent implementations of Blackboard, etc have included wiki and blogging functionality, many institutions are starting to use wikis as learning platforms in their own right.

Pulling it all together with web 2.0 start pages

Web 2.0 can act as a professional development tool in several ways:

● through providing access to an intelligently structured stream of up-to-date information about your sector in terms of well selected RSS feeds of opportunities, news and information;

● by helping you to connect to a wide network of like-minded individuals and resources, and enabling you to develop yourself as an important resource for others in your own right;

● by immersing you in ongoing, multivoiced conversations and debates about your activities and those of your colleagues that cut across national, institutional and professional boundaries through blogs and wikis.

Web start pages, such as Pageflakes (www.pageflakes.com/) and Netvibes (www.netvibes.com), allow you to gather together your favourite feeds, e-mail accounts, del.icio.us links and much more into a single personalised page, providing an automatically updated overview of the information streams that you have set up for yourself.

In the example below you can see how a Netvibes page has been set up to display a Gmail account, del.icio.us bookmarks, newsfeeds from the Project Gutenberg site, a jobs site, a feed of Facebook status updates and a technology news site. Other feeds might include favourite blogs or updates from a wiki that you are working with.
Web 2.0 is about connecting with and integrating yourself into a wider, more dynamic way of experiencing and contributing to information. It offers a quite extraordinary opportunity for development, all the more remarkable for its accessibility to all. Experiment with it. Find something that appeals to you personally. Try out a range of different sites and tools until you find something that works for you. And most of all have fun!

**Further reading**

*The Common Craft Show* features three short videos on wikis, RSS and social-networking in “plain English” at [www.commoncraft.com/show](http://www.commoncraft.com/show) that are informative and funny.

**RSS**
The BBC has an excellent introduction to RSS feeds at [www.bbc.co.uk/feedfactory/](http://www.bbc.co.uk/feedfactory/).


Google Reader ([www.google.com/reader](http://www.google.com/reader)) provides an excellent series of bundled feeds for people who are just starting.


**Blogs**


**Social bookmarking**
Popular services include:

- [http://del.icio.us/](http://del.icio.us/)
- [http://digg.com](http://digg.com)
- [www.diigo.com/](http://www.diigo.com/)
- [www.furl.net/](http://www.furl.net/)

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