

# Briefing paper on Web 2.0 technologies for content sharing: Strategy and policy

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Web 2.0 can be defined as a set of technologies that allow easy content sharing on the web and that enable social software, ie. Software that supports group processes. Social software includes blogs, wikis, content sharing systems (such as Flickr and YouTube), social bookmarking systems (such as del.icio.us), and content syndication systems. While the first systems that can be classed as Web 2.0 or social software appeared more than a decade ago, during the last three years there has been a strong growth in the number of available social software systems, and in their use. With the rise in use, there are a number of concerns relating to creation, ownership and preservation of the content. Some of these are discussed below.

## Background

Web 2.0 is not really a new technology, however it is creating new ways of working, including opening up new opportunities in teaching and learning, that have not been possible on a large scale before. This is similar to the that virtual learning environments (VLE) created new opportunities during the 1990s. Before VLEs the technology was only suited to the enthusiasts and experts due the difficulties involved in setting up tools, developing and loading material and registering students. Web 2.0, and some of the associated developments such as the creative commons licenses, raise issues which universities are just beginning to grapple with.

Few universities have specific Web 2.0 policies or strategies (the only one we are aware of is the University of Edinburgh<sup>1</sup>), but a considerable number are beginning to address Web 2.0 when updating their strategies and policies.

There are several strategies and policies that are germane, and this includes learning and teaching, information technology, information and accessibility. Some of the issues that may need to be addressed in developing these strategies are discussed below.

This paper is best read in conjunction with the other briefing papers:

- Web 2.0 - An introduction
- Institutional good practice
- Content creation
- Teaching and Learning.

## Intellectual property rights

Web 2.0 raises a variety of issues in relation to intellectual property rights (IPR).

### Ownership

Who "owns" the content when it is collaboratively created? The authors? The university? The creators of the system?

The ownership may be reasonably clear when all the creators are members of the same university, but what happens if the system is open to people who are not members of the university? Or the system is not hosted by the university? Some systems address this by making clear who the owners are and what

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<sup>1</sup> See [http://www.is.ed.ac.uk/projects/Web\\_2.0\\_Initiative](http://www.is.ed.ac.uk/projects/Web_2.0_Initiative)

rights people have on all systems, often making use of one of the creative commons licenses<sup>2</sup>. This report, for instance, cannot be published under creative commons license by the authors as the contract specifies: "The information provided in the final report and the rights to all other outputs, shall become HEFCE/JISC property".

## Re-use

Universities make considerable use of published materials in teaching and learning which may be in paper or electronic form. These include text books, academic papers, learning objects and pre-prints. When these are included in a Web 2.0 environment they may become visible to people outside the university, and the current licensing arrangements may need to be reconsidered.

What are appropriate licenses to negotiate with suppliers that allow for appropriate use and visibility of materials? This may raise issues of who is a "member" of a university. Clearly employees and students are, and visiting lecturers are usually deemed to be. But what of someone from outside who participates in a single activity? These issues are not new, or specific to Web 2.0 but it is bringing some of these issues to the fore.

Should it be possible to amend (commercially) published resources? Or only to comment on them?

## Accessibility

While there are some accessibility concerns with a number of Web 2.0 systems, many of which make use of technologies such as Ajax, JavaScript and Java which can cause problems for some there are also a number of potential benefits. For instance, students can describe content in other technologies. It is easy to add transcripts or notes to audio or video for instance which offer alternative affordances.

How can the features of Web 2.0 be harnessed to enhance accessibility for all students (and staff)?

Are there particular approaches that should be supported in teaching and learning strategies?

## Teaching methods<sup>3</sup>

It has been widely argued that Web 2.0 will fundamentally change teaching and learning, by making the students partners in the creation of knowledge rather than passive consumers. Chris Lehmann argues<sup>4</sup> "It's about collaboration -- it's about understanding that we are more than the sum of our parts. It's about understanding that my ideas will be made better if I listen to your ideas. And it recognizes that your ideas could influence me no matter where you live, as long as we both have access to a blog or a wiki." It has been suggested that Web 2.0 is particularly suited to social constructivism, which may be defined as emphasising the importance of culture and context in understanding what occurs in society and constructing knowledge based on this understanding<sup>5</sup>. However, some new models of learning have been proposed including Connectivism. George Siemens<sup>6</sup> defines Connectivism by saying:

"Connectivism is the integration of principles explored by chaos, network, and complexity and self-organization theories. Learning is a process that occurs within nebulous environments of shifting core elements – not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves

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<sup>2</sup> See <http://creativecommons.org/> where there are a variety of licenses permitting various different forms or re-use.

<sup>3</sup> There are many different pedagogic models, for a good list of instructional design theories see [http://carbon.cudenver.edu/~mryder/itc\\_data/idmodels.html](http://carbon.cudenver.edu/~mryder/itc_data/idmodels.html) (which divides them into Modern Prescriptive and Postmodern Phenomenological Models.

<sup>4</sup> <http://practicaltheory.org/serendipity/index.php?/archives/747-Some-Thoughts-About-School-2.0-Part-1.html>

<sup>5</sup> This definition is taken from Beaumie, Social Constructivism <http://www.coe.uga.edu/epltt/SocialConstructivism.htm>

<sup>6</sup> Connectivism: A Learning Theory for the Digital Age, George Siemens, <http://www.elearnspace.org/Articles/connectivism.htm>

(within an organization or a database), is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing."

On the other hand, many argue that there is nothing new in Web 2.0 for education (or learning 2.0, or education 2.0). Indeed one could argue that the ideas espoused by writers on learning 2.0 have already been expressed at least since Plato.

- Do we need to consider new pedagogic models?
- Do these need to be reflected in learning and teaching strategies?

## Assessment

As the teaching and learning briefing paper suggest, one of the strengths of Web 2.0 is its ability to support group work. However, the assessment of group work has always been problematic given that individual members may contribute differing effort and ability to the submitted work. However, if the work is open to the world to view, comment on or even jointly develop then issues arise over how to assess the work and how to assign credit. While it is true that it is possible in many systems to view the history and see what people have contributed this is not unproblematic: if some members are better writers than others their contribution may be the visible contribution while others may have done the research or developed the thesis and this might not show. It may also be placing a tremendous burden on the marker to not only look at the final work but to view how it was developed.

- Do we need new methods of assessment for Web 2.0?
- What are effective forms of assessment?
- How far do the needs of assessment determine the nature of the course?
- Do teaching, learning and assessment strategies need to take specific account of Web 2.0?

## Security

We are taking the term security very widely to include personal security, network and IT systems security.

### Personal security

Web 2.0 opens systems up to much wider and more open use, and there are concerns over child protection (rarely a problem in universities, though issues may arise in field like medicine, health, social work and education) and cyber-bullying.

- What policies need to be in place to protect staff and students from abuse?

### Network and IT Systems Security

All universities have acceptable usage policies (it is a requirement for connection to JANET), but many go much further and block a wide variety of ports and tools. In some cases this is because of concerns over bandwidth usage (many universities have been blocking Skype for fear of becoming a super-node and having undue network traffic). Others have blocked services such as FaceBook and MySpace either over concern about legal responsibility for postings or because of fear of issues like cyber bullying.

- What is the right balance between openness and safety?

## Hosted or commercial services

Many universities are beginning to host their own Web 2.0 services, either within the VLE or separately. Examples include the University of Warwick offering all students a personal blog, the University of Leeds

offering blogs on those courses where lecturers ask for it or the University of Brighton offering elgg<sup>7</sup> to all members. Equally, some lecturers are finding that it is better to go to the places that their students are already using, and there are reports of lecturers shifting to systems like MySpace after finding that students will not engage within the VLE.

There are a number of other important issues. We have already discussed the ownership of the content, but there are also issues around controlling access to the content, registering course cohorts automatically into the system and defining communities.

There are also commonly expressed concerns around the long term sustainability of many of the Web 2.0 systems. Many are start up companies, and inevitably some will fail. Will content continue to be available? What happens if the company closes in the middle of a course? What happens if they decide to start charging users?

- Is it safe to rely on commercial systems? Or should they be hosted by the institution?
- If commercially hosted systems are used what safeguards need to be in place?
- If internally hosted systems are used will a university be able to offer the range and variety that staff and students want?
- If internally hosted will students have continues access to "their" account once they leave?
- How can students take their data with them?

## Preservation

Content is important and the one of the key functions of universities has been the preservation of information. Historically this has been done using published works and theses retained in a library. With electronic resources three new issues present themselves:

- What is the authoritative version of an artefact? This is especially problematic where many people are contributing to it. At what point does it become something that should be preserved? Should all the changes be preserved too?
- What is the status of a work? If it can always be changed then how can peer review (or similar processes) be used to determine its value and authority? And what is the scope of any such review?
- How can the content be preserved in a form in which it can continue to be accessed? Technology is changing very fast, and while some formats will be usable for a long time (HTML for instance) others may not be. Will a MySQL database still be usable in 20 years on the hardware and operating systems available then?

These raise issues that can be addressed in information policy and might include:

- Who determines what information should be archived?
- What formats are appropriate for preservation? How far does this restrict content creation?

## Conclusion

Brian Kelly<sup>8</sup> in a recent presentation "Web 2.0: How Should IT Services and the Library Respond?" concluded that "We need to avoid simplistic solutions to the complexities" going on to list some of these simplistic solutions by assigning them to what he called fundamentalists:

- **Open Standards Fundamentalist:** we just need XML
- **Open Source Fundamentalist:** we just need Linux
- **Vendor Fundamentalist:** we must need next version of our enterprise system (and you must fit in with this)
- **Accessibility Fundamentalist:** must do WAI WCAG

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<sup>7</sup> <http://elgg.org/>

<sup>8</sup> <http://www.ukoln.ac.uk/web-focus/events/meetings/emuit-2006-11/web2.0-challenges.ppt>

- **User Fundamentalist:** we must do whatever users want
- **Legal Fundamentalist:** it breaches copyright, ...
- **Ownership Fundamentalist:** must own everything
- **Perfectionist:** It doesn't do everything, so we'll do nothing
- **Simplistic Developer:** I've developed a perfect solution – I don't care if it doesn't run in the real world
- **Web 2.0 Fundamentalist:** Must use latest cool stuff

Developing policies that provide a robust framework for using Web 2.0 effectively will not be easy, and are likely to require constant review as the environment is changing extremely rapidly at the moment.