HE practice and Web 2.0 - What's stopping us?

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This session will focus on of how web 2.0 is changing learning and teaching within HE courses. The session will provide an outline of the topic informed by literature and will move on to provide examples of practice using web 2.0 tools.

The session will follow the following format

- Introduction to the topic, what is web 2.0, definitions and examples
- Outlining the range of ways that web 2.0 is affecting HEIs
- Focus in particular on learning and teaching practices and how they can/are changing
- Identify key tensions for pedagogy brought about by web 2.0
- Discuss ways that learning and teaching practices are adopting web 2.0 practices experiences and show case 3 examples of practice using etherpad, wikis and YouTube.

PAPER

This session focuses on how web 2.0 tools are impacting on learning and teaching practices in Higher Education. The definition of web 2.0 is contested. The original developer of the web, Tim Berners Lee, considers it to be lacking any coherent meaning (2006). The term was coined by Tim O'Reilly in 2004 to explain what makes some web sites more successful than others. Paul Anderson (2007) adapted O'Reilly's principles into six that particularly apply to the adoption of web 2.0 in education. These are

1. Individual production and user generated content

2. Harness the power of the crowd

3. Data on an epic scale

4. Architecture of participation

5. Network effects

6. Openness

However whilst these are feature of the web 2.0 services, other commentators have found that summarising web 2.0 more succinctly to be helpful. The Committee of Inquiry into the Changing Learner Experience in its executive summary says 'Web 2.0 or Social Web technologies, technologies that enable communication, collaboration, participation and sharing' (2009, p. 5). Dohn prefers to define web 2.0 as a practical activity with a set of characteristics (including collaboration, open-access, continuous production and reproduction and transformation of material) which are not necessarily restricted to the online environment (2008, p. 45). Crook defines "web 2.0 is a set of internet services and practices that give a voice to individual users. Such services thereby encourage internet users to participate in various communities of knowledge building and knowledge sharing" (2008 p.8). Despite this lack of any precise definition web 2.0 has entered into the language of the 21st century.

Higher Education, both at the level of an individual institutional and the sector as a whole, is coming to terms with how these web 2.0 technologies can, will and should impact on their practices. There have been a number of studies of student perspectives of web 2.0. For instance Spire (2007) surveyed students to find out their levels of use of web 2.0 tools, Creanor et al. (2006) examined students' attitudes to using technology and Conole et al. (2006) explored students' expectations of using technology in their studies. In addition a national enquiry into the impact of web 2.0 tools on the behaviour and attitudes of learners entering higher education has been set up in 2008 (Committee of Enquiry into Changing Learning experience). There has been some attention given to how web 2.0 tools impact on teaching, learning and institutional practices in HE (Bridges, 2000; Cope & Kalantzis, 2008; Dohn, 2008; Jones, 2008) but little of this is empirically derived.

Categorising web 2.0 tools and services

Table 1 below shows how web 2.0 tools and services can be grouped in 6 different categories. However caution is needed with such categorisation as some of the tools fit into more than one category. For instance Twitter, the microblogging site, is an example of user generated content, as participants send short messages to the Twitter service which are published for others to view. However it also has features of a social networking service, where users can build up a network of people that they follow.

Social bookmarking services	allow tags to be shared with other users.	del.icio.us
Social networking services	Enable users to set up links with others	Twitter, LinkedIn, Face Book
Aggregation services	Which gather information from across the web and publish it in one place.	iTunes
Mash ups web services	that pull together data or functionality from two or more different sources to create a new service eg user recommendation data within a library catalogue.	
User generated content	discussion boards, blogs, wikis	PBwiki, Blogger
Content sharing services	Services that allow users to upload video, pictures or other files	Youtube, Flickr, slideshare

Syndication	A service which allows users to get files downloaded (most typically sound file)s to their computer when the user has signed up for the feed.	iTunes,

Associated with web 2.0 is a set of new concepts which have entered into our 21st century language eg podcasts, blogs, wiki, tag (a short usually one word, label which describes a posting), folksonomy (a system of classification derived from the practice of collaboratively creating and managing tags to annotate and categorize content).

Thus web 2.0 is a radically different way of generating, storing and accessing information. In addition the information being created and shared can be radically different from traditional print based media in that it can be rich in pictures, video and sound.

Possibilities of web 2.0 in learning and teaching

The advent of web 2.0 has presented many possibilities for learning and teaching. Crook has identified three key motivators or enablers for this change; firstly because as young people are active users of the medium they will be familiar with the ways the medium operates (p.28). Secondly he argues that there is a match between web 2.0 practices and dominant policies on the goverment's agenda in terms of the being able to participate in the knowledge economy, being able to engage in lifelong learning in a fluid skills market, and fitting with DfES' *Harnessing Technology Strategy 2005*, including personalisation of learning and encouragement for group work. Finally he talks of web 2.0 fitting with what is known about learning theory in that it lends to design of activity based learning tasks based on constructivist principles (p.31).

Tensions when using web 2.0 in learning and teaching

However alongside these possibilities there are a number of tensions which teachers and learners must navigate when adopting web 2.0 tools. The most comprehensive discussion of tensions is provided by Crook (2008) who lists 11 different ways in which web 2.0 practices challenge HE teaching and learning. I have summarised Crook's list below in the order that he presents them and using some of the labels (eg walled garden) that he uses. After outlining each tension key questions suggested by each tension are proposed and these questions will form basis for an empirical study which is related to this paper.

1. Teaching and learning; a learner centred approach is a dominant feature of teaching and learning practices using web 2.0 tools and this requires teachers to have skills in managing these sorts of learner centred activity (such as orchestrating and supporting independent research (p.35)).

   - What are the barriers for teachers in terms of learner centred design? Are they related to the skills of using the tool or the time required to facilitate learner centred design (using web

2.0 tools)? Do teachers feel that these sorts of activities undermine their authority or are hard to control?

2. Walled garden versus open areas – A key feature of the web is that it is uncensored and open medium. For educational practices this raises issues and practical questions. Should students' work be made available to the wider world? Without this the key feature of web is not present. However making students' work public clearly raises issues of duty of care and managing productive exchanges and of reputation as well as debates about censorship. There is a trade off with authenticity provided by a wider sense of audience and the potential for exchanges on open internet compared to security and control of VLE. (p.37). This tension was also identified by Bridges (2000).

   - How do teachers negotiate the tension between authenticity or learning activities which occur on the web compared to their responsibilities to protect their students and the institution's reputation?

3. Private learning versus individual learning. Crook discusses the focus on collaboration that web 2.0 tools afford and contrasts these with the personalisation agenda which is currently being promoted in schools, arguing that personalisation implies that students should have the choice about working in groups. In addition the form that assessment takes in the school sector is generally individualised so this also shapes the adoption of group work activities.

   - Does use of web 2.0 tools imply increased use of group work through the web 2.0's opportunities for collaboration or can web 2.0 learning activities be individually managed and assessed?

   - How do teachers manage and assess group work?

   - What is lost as synchronous face to face aspects of learning move online? For example intimacy, pace, rhythm, and flow. How do teachers feel about this?

4. Digital natives/digital divide issues. There are two aspects to this tension outlined by Crook, firstly the familiar discussion of students' access to the technological tools and skills. The second aspect to this tension is the contrast between the skills of the students with the skills of the teacher. However this is not a focus of this study which is concerned with the experiences of teachers who are early adopters in the take up of technology. However the extent to which teachers expect students to have internet access at home and how this affects the way they plan activities may affect how they design an activity..

5. Risks of antisocial behaviour on the web eg cyber bullying and requirements and importance for safeguarding in schools.

   - Questions that arise include how do teachers manage their responsibilities to students' safety?

6. Cutting and pasting culture – Dohn (2008 p.658) identifies that the activity of cutting and pasting is part of internet web 2.0 practices . Crook extends cutting and pasting to other forms of digital amalgamation such as mashups (for instance where a Google map is incorporated into another web site) and the rip-mix-burn process (where CDs are mixed together and burned onto a new CD) The

tension that arises here is teaching students about using other people's materials creatively and within academic (and legal) codes of acceptability.

- How do teachers manage plagiarism versus creative use of others' work?

- Are there any new ways of working that refine academic learning practices eg stronger emphasis on teaching about provenance, or using activities which involve creatively bricolage?

7. Permanence of web contributions – the fact that things posted to the web can remain there in perpetuity leds to a number or tensions. For the students there is a question about their awareness of this level of exposure and whether it is the teachers' responsibility to make this clear to the student? In addition it raises the question of the extent to which this level of exposure inhibits students' contributions and how teachers manage this reluctance? There are overlaps between the second tension identified above in that the reputation of individuals and the institution are implicated by the permanent nature of web postings.

- How do institutions understand their role and responsibilities in relation to material published on the internet?

8. Print literacy versus digital literacy Crook discusses the nature of the different medium results in different constraints and affordances. Kres argues for the importance of multimodality or ability to express ideas across a wide range of representational systems and says digital literacy is about having confidence in reading these systems (p.43). However Crook argues that reading and writing provide considerable cognitive impact and that these skills (of reading and writing) in traditional print form should not be devalued by overly promoting new digital literacies.

- How do teachers cultivate fluency and sensitivity in new forms of expression whist at the same time protecting the special potency of print literacy?

- How are skills for digital literacy being taught?

9. Serial or parallel processing. Crook argues that academia values linear forms of reasoning based on language rather than the new modes of analysis based on more informal, pattern-based methods of reading such as folksonomies and tag clouds He talks of a loss of formalisations and taxonomies in web 2.0 world (p.45).

- How do teachers relate to informal systems of data organisation characterised by personal tagging and folksonomies?

10. Successive attention versus simultaneous attention. He argues that multitasking is a phenomena encouraged by technological services (eg MSN) and that students appear to have higher rating on distractibility if they spend time on MSN (p.45). However this is quite contrary to the sustained focus on material expected of study.

- Hence how do teachers negotiate the tension between the sustained way of working expected in academic work with promotion of multitasking through use of web 2.0 tools?

- Have teachers found any value in the 'volatile exploration' that occurs when students are multitasking with MSN, social networks etc.?

11. Authorised knowledge versus distributed knowledge; Web 2.0 presents a very different way of producing and validating knowledge. The ease with which one can publish on the web and wide geographic and demographic reach that the web facilitates enables a more democratic form of knowledge production and validation. Crook outlines three points based on Keen's arguments of the 'cult of the amateur' (2007 in Crook 2008 p.46) against the effect that web 2.0 has had on knowledge promotion and publication of cultural knowledge. Firstly that contributions on the web2.0 are dominated by offerings that are trivial or narcissistic. Secondly that the knowledge discussed on web 2.0 services (eg blogosphere) are poorly evidenced so make it hard for the read to make a judgement on the validity of the knowledge being presented. And thirdly that the quality control mechanisms of print are missing with the web. In addition Crook identifies additional problems with the value of knowledge available through web 2.0 services that is that they are hard to reference precisely eg YouTube video and they do not have persistence (URLS out of date etc).

Therefore a number of questions arise surrounding students' digital literacy (finding and judging and referencing web 2.0 materials).

- How do students judge the authority of sources when researching in a web 2.0 environment? And how do teachers address the skills of inquiry required to make such judgements? (p.48)

- Where does the responsibility for developing the critical and confident attitude to understanding Web 2.0 knowledge reside with students, teachers, librarians or study skills tutors?

Conclusion

The world has changed radically with the invention of the web and that change was accelerated through the services known as web 2.0. Whilst the paper has identified some powerful drivers for uptake, it has also described a considerable number of tensions that arise for teachers and learners when using these tools. This paper is part of some preliminary work undertaken to explore the how teachers in HE are negotiating these tensions, which aims to understand the range of skills required by teachers using web 2.0 tools in their teaching.

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