UNIVERSITY OF LONDON
Centre for Distance Education

LASSIE: Libraries and Social Software in Education

Social Software, Libraries and distance learners: literature review

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Introduction

LASSIE (Libraries and Social Software in Education) is exploring new developments in technology commonly referred to as social software (or Web 2.0) and how it might be used to enhance library provision for distance learners. This literature review is divided into three broad areas:

- an overview of social software and how this is impacting on the library community,
- recent thinking about library provision and distance learners
- and the concept of libraries as a social space in the physical and virtual world.

The review was undertaken at the outset of the project to inform the project team and provide context, definitions and a clearer understanding of previous research in this field. The review highlights some examples of how different types of social software are being used in the library community, recognising that much of this work is currently experimental. The review is also written at a time when the pace of change is very rapid, therefore it can only hope to provide a snapshot of what is occurring up until June 2007. Nevertheless, it should be valuable to both the project team and more widely to the library community. The literature review has also informed the development of the project and the selection of pilot technologies to explore further in the case studies.

In the context of this project, the process of undertaking a literature review was itself a valuable research exercise, as it demonstrated the challenges faced when doing research in a Web 2.0 world. Gilster (in Martin & Madigan, 2007) highlighted this challenge in a recent publication arguing that:

> "Until the tools become available, the thorough scholar will supplement conventional library research with the search engines that mine the intersection of content and communication." (Gilster in Martin & Madigan, 2007, p.49)

By this he meant tools such as news readers (such as Google Reader) and internet search engines, which help us to gather together the literature and supplement the references found in traditional bibliographic databases such as LISA, LISTA and ERIC. In undertaking this literature review on social software, the project team have developed new research skills and tried out new tools, as we are keen to use social software wherever possible to facilitate our research. However, it remains a challenge to stay abreast of developments in this fast moving field and the pace of technological developments is such that inevitably this literature review will date quickly. This document could be viewed as an interim report as we plan to update the literature review towards the end of the project (in December 2007). The project blog will also provide details of progress to date on the project and is available at: http://elearning.lse.ac.uk/blogs/socialsoftware/

What is social software?

LASSIE decided early on to focus on the term 'social software' to describe the development of new tools and services that are changing the way people use the internet, making it easier to collaborate, communicate and share information. This concept is more commonly (and somewhat controversially) often described as Web 2.0, however we preferred the term 'social software' as it seems to describe the phenomena more accurately. It encompasses a huge range of tools (which are briefly discussed later) but the features many of them share is that they are hosted remotely, they facilitate sharing and communication, they allow users to add content and that they are easy to use.

The phrase Web 2.0 was reputedly coined in 2004 by O'Reilly Media, although it described technologies that had been developed earlier in the1990s. Social software is not really software as such, but internet services that could ultimately replace desktop software. It's about using the Internet as a platform to run software and services rather than your desktop PC, so most software tools are hosted remotely and can be accessed from anywhere with an internet connection. The online encyclopedia *Wikipedia* (which is itself social software) describes much of the background and definition of the term. For more details see: http://en.wikipedia.org/wiki/Web_2.0

However, the term Web 2.0 has led to fierce debates between individuals such as Tim O'Reilly and Tim Berners-Lee, the 'inventor' of the world wide web.The debate largely centres on Tim Berners-Lee's dislike of the term Web 2.0, as he argues the phenomena we are experiencing is simply doing what he always envisaged the web would do: allowing people to collaborate and communicate. He also argues that many supposed 'web 2.0' technologies have existed since the beginnings of the internet. He maintains that the development of the Semantic web is far more significant. The Semantic web is about expressing web content not simply in natural language, but also in "a form that can be understood, interpreted and used by software agents, thus permitting them to find, share and integrate information more easily" (W3C, 2007).

Web 2.0 has been described as an 'attitude not a technology' by Ian Davis (2005) and this project largely steers clear of the debate about terminology. However, it is clear that something has been happening to the web in the past few years which has made it more participatory, easier for users to contribute, share and work collaboratively. It is also clear that the concept of Web 2.0 is becoming mainstream and the tools and services are becoming extremely popular. To summarise, some overall characteristics of social software or web 2.0 include:

- development of social networks
- content created by users rather than created by an organisation
- development of user profiles
- use of folksonomies or tagging to attach keywords created by users, to items to aid retrieval

Meanwhile JISC in their recent paper on web 2.0 (Anderson, 2007) highlight six key concepts related to this subject, which 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

This report was particularly timely and provided the UK education community with a valuable overview of what Web 2.0 is and how it might impact on the community. The report is particularly relevant as it has a special focus on the role of libraries for collection and preservation.

Examples of social software

There are numerous examples of social software with the number of tools growing rapidly all the time. Therefore, this section provides a short overview of the main types of social software that exist. The key feature with any social software is that it is easy to use and is usually free at the point of use. Tagging is another key feature of most social software, which helps users manage their resources and identify other users with similar collections or interests.

• RSS feeds / Syndication / Atom

RSS is not a social software but it is a way of communicating information in a format that Feed Readers or News Reader software can understand. It has become an important way of using social software effectively. Most blogs have RSS feeds, which you can subscribe to, to ensure content is pushed into your Feed Reader of choice, rather than you having to visit the website to read a blog. Bradley (2007) argues that RSS is fundamental to most web 2.0 technologies, and while people don't need to understand technically how it works, it does underpin most social software.

• Blogs

Blogs are probably the most popular type of social software. They are a simple way of creating a website which is updated, often on a regular basis with 'posts'. They frequently take the form of an online journal and usually only have one main author. Blog software can be set up and hosted on a server, but there are several blog providers who host the service for free. Features that blogs

include are commenting facilities so that others can participate in a discussion; tagging to associate postings with a keyword or topic; a calendar, so postings can be retrieved by date.

• Wikis:
Wikis are another very popular type of social software. They are again a simple way of creating content on a website, however rather than having one author, they often have many contributors and are ideal for collaborative working. Most wikis allow contributions from people once they have registered. The most famous example of a wiki is *Wikipedia*, which is an online encyclopedia which can be edited by any registered user. Features include versioning and document history, so previous versions can be retrieved. Discussion is also possible. Again wikis can be used remotely or set up on a local server.

• Social bookmarking and resource sharing
Social bookmarking tools allow users to store their bookmarks or Internet Favourites remotely on a site so they can be accessed from any computer connected to the internet, rather than being stored within your browser. Sites such as *del.icio.us* (http://del.icio.us) allow you to store, organise and share your internet resources. The project team decided early on that this site would be particularly useful for storing and sharing any relevant websites for the purposes of the project and have set up an account which includes links to many valuable resources we have found. This is publicly available at: http://del.icio.us/lse_lassie/

Other tools are also available to allow you to share other types of resources, such as bibliographic references (*CiteUlike* http://www.citeulike.org/ and *Connatea* *http://www.connotea.org/*), music, video and films (*Listal* *http://www.listal.com/*), books that you own (*LibraryThing* *http://www.librarything.com/*).

• Social networking sites: (*MySpace, Facebook, Elgg, LinkedIn, Ning)*
Social networking sites are probably another of the most popular type of social software. Users create a profile and join a network, which might be connected to where they live, what music they like, where they work or where they study. Both *MySpace* (http://www.myspace.com) and *Facebook* (http://www.facebook.com) are extremely popular social networking sites which primarily have a social function allowing people to make friends, talk online and share resources. Professional social networking sites (such as *LinkedIn* *http://www.linkedin.com/*) and those focused on education (such as *Elgg* *http://elgg.net/*) are also becoming popular. It is also worth mentioning that many social networking sites incorporate other web 2.0 technologies, such as allowing users to set up blogs or Wikis.

• Sharing
The two key examples here are *Flickr* (http://flickr.com) which is a photo sharing website and *YouTube* (http://www.youtube.com/) which is a video sharing website. Users can upload their own photo or video resources to the site. These are then available to other users of the site. Tagging makes the resources retrievable by others interested in similar subjects. However other sites exist that allow sharing of different sorts of resources, for example *Slide Share* which allows uses to share PowerPoint presentations.

• Virtual Worlds
Second Life (http://secondlife.com/) and other virtual worlds allow users to create a profile and move around a virtual world. You can attend events, buy and sell goods and there are currently a number of project exploring it's potential for teaching and learning.

Other social software
This report cannot hope to outline all the social software tools that exist as the number is growing each day. There are a few other features are associated with social software that are worth briefly mentioning. Personalisation functionality on websites such as *Google* and *Yahoo* often uses some web 2.0 capabilities. For example *iGoogle* (http://www.google.com/ig) allows you to add RSS feeds to your home page so you can get updated content from websites or blogs you might read. Podcasts and audio blogging also fall under the social software banner, using many similar

techniques. Mashups are also part of social software, often bringing data together from different sites and 'mashing it up' in a new way. For example *ChicagoCrime.org* (http://www.chicagocrime.org/) which uses crime statistics and *Google maps* to identify locations where crime occurs in the city.

Social software and teaching and learning

Educationalists and learning technologists are one group that fairly quickly began to explore the potential of social software for teaching and learning. Tools such as blogs are particularly useful for reflection and wikis allow for group projects and new ways of working collaboratively. Both open source and commercial VLE software has been fairly quick to develop social software functionality and there is a large amount of research currently being undertaken in this whole area.

JISC have also provided several timely publications such as the TechWatch report mentioned earlier (Anderson, 2007) and a report on Web 2.0 for Content Creation for Learning and Teaching in Higher Education. The draft report for community comment appeared in May 2007. It included case studies from the Universities of Warwick, Leeds, Edinburgh and Brighton and made a series of recommendations for further research into the potential of Web 2.0 technologies for teaching and learning. The report said:

> Web 2.0 is, in our view, a technology with profound potential for inducing change in the HE sector. In this, the possible realms of learning to be opened up by the catalytic effects of Web 2.0 technologies are highly attractive, allowing greater student independence and autonomy, greater collaboration, and increased pedagogic efficiency.(Franklin and von Harmelen, 2007, p.1)

The report also highlighted a number of areas where further research was required to explore issues such as IPR and copyright, impact on plagiarism, potential application of Web 2.0 for institutional repositories and issues such as privacy and data protection in particular if services are hosted remotely.

Social Software in Libraries and Library 2.0

The library community was another community that have been exploring the potential of social software to enhance their services for a number of years. The term "Library 2.0" was coined by Michael Casey in 2005 who sees Library 2.0 at it's heart, being about "user-centred change" (Casey, 2006). The term encapsulates the idea that we can enhance library provision using social software and web 2.0 technologies, although again the terminology itself has proved to be controversial. Crawford (2006) found 62 different views and seven distinct definitions of the term which he usefully brought together in *Cites and Insights*. He argued the term is confusing, and as well as a concept, it is also a bandwagon which has been used to "*deride libraries as being irrelevant, rigid and unresponsive to change"*.

A number of the concepts associated with social software, in particular the idea of 'user generated content' does make some librarians uncomfortable. Many web 2.0 technologies allow users to 'tag' resources, which has been likened to adding subject headings. It allows resources that have been similarly tagged to be shared between users. However tags are devised by a user, and can be employed inconsistently or with different meanings. For librarians, particularly cataloguers, familiar with controlled vocabularies such as Library of Congress Subject Headings, they may find the idea of allowing users to come up with their own descriptive terms akin to anarchy. Similarly there has been a lot of work undertaken in the library world to devise standards and to develop metadata schemas to describe web resources. The idea of tagging can sometimes be seen as a counter movement to these standards. Nevertheless, these ideas need not be seen competing and tagging is coming to be seen as an additional way of describing resources, not an alternative to creating good quality metadata.

Crawford argues that librarians should not focus on the technology but focus on the phenomena made possible by social software technologies, which essentially means participation and the

facilitation of conversations. Crawford recognises that Library 2.0 as a concept may cause problems in libraries, as the term has been linked to a negative view of the library. He also sees that there can be problems integrating these technologies into libraries which have not traditionally used open source systems, but integrated monolithical systems such as catalogues.

The UK library system suppliers have been vocal in the Library 2.0 world and Paul Miller, a Technology Evangelist from *Talis* sets out 'Paul's Principles of Web 2.0' which included characteristics such as it being about:

- Sharing and communication
- Remix
- Built on trust
- Freeing of data
- Participatory
- Community building
- User generated content
- Modular

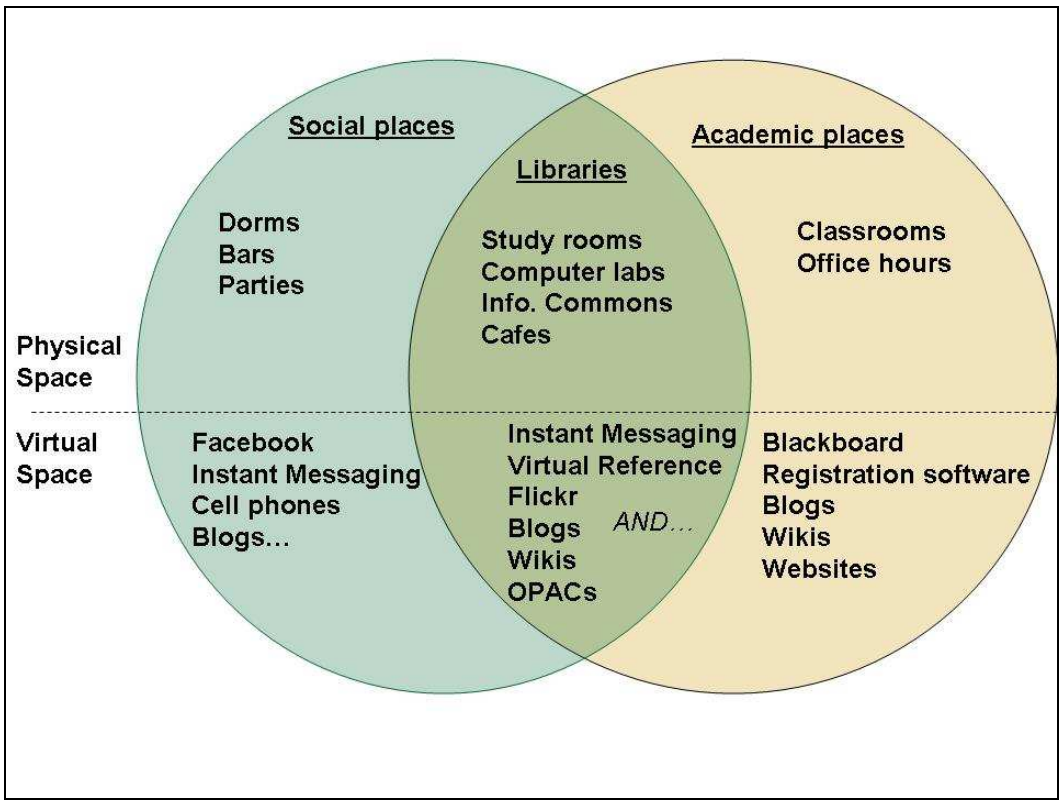
Miller, a keen advocate of the Library 2.0 movement and concept, argues:

> Leveraging the approaches typified by Web 2.0's principles and technology offers libraries many opportunities to serve their existing audiences better, and to reach out beyond the walls and Web sites of the institution to reach potential beneficiaries where they happen to be, and in association with the task that they happen to be undertaking. (Miller, 2005)

Moreover Miller, suggests that if libraries are to continue to remain relevant and serve their users they must engage with these technologies, otherwise users:

"…will bypass processes and institutions that they perceive to be slow, unresponsive, unappealing and irrelevant in favour of a more direct approach to services offered by others that just might be 'good enough' for what they need to do." (Miller, 2005)

This attitude is typical of the negative associations Crawford (2006) cites with the 'Library 2.0 bandwagon. The idea that we have to engage otherwise we'll become irrelevant could be seen as polarizing opinions in the library world. Building on the strengths of traditional library services and enhancing them with new technology should surely be the way forward? It is also fair to say the UK is currently experiencing a Library 2.0 bandwagon, with a daily round of events and seminars being advertised on the topic. UKOLN's *Web Focus* led by Brian Kelly is currently giving a lot of advice to HE and FE sector in the UK about how to utilise these technologies, how to overcome the barriers within institutions. Similarly Phil Bradley, the internet consultant, is giving a lot of presentations and training sessions in this area and recently published a book on how to use Web 2.0 in libraries (Bradley, 2007). There is a real danger that some librarians will continue to view the Library 2.0 concept as slightly threatening, rather than a way to enhance their current skills and professional activities. A useful diagram, by Habib (2007), available from Flickr, encapsulates his view of Library 2.0.



From Michael Habib's Flickr site (Licensed under Creative Commons):
http://www.flickr.com/photo_zoom.gne?id=222296001&size=o

Libraries using social software

Despite the hype, many libraries are taking the plunge and experimenting with social software. There are some genuinely useful examples of how the technology can enhance our services. Many of the examples are currently from libraries in the US, who began exploring social software somewhat earlier than in the UK. In fact the literature search found a huge number of articles in academic journals, but also on blogs and on the web more generally about such innovations. There are many lessons that can be learnt from our US counterparts' early experimentation. Therefore this next section attempts to provide some examples of libraries using social software, and to draw conclusions where possible about it's usefulness.

It is also worth mentioning that librarians in other countries outside the US are also starting to explore using social software technologies, for example Judy O'Connell who works in school libraries in Australia maintains a blog which has much relevant information at:
http://heyjude.wordpress.com/

A few useful monographs on the subject of social software in libraries published very recently, notably by Farkas (2007) who developed the hugely popular 'Five weeks to a Social Library' online course. Phil Bradley (Bradley, 2007) also has published a book on the same topic very recently. Bradley provides a valuable overview of what web 2.0 technologies are and how they can be used by librarians both personally, but in particular, to enhance library services. Other notable books on the subject include: Casey & Savastinuk (2007) and Sauers (2006) which looks specifically at blogs and RSS. Expect the market to be shortly flooded with similar titles which will provide us with many useful ways in which we can exploit the new technologies.

It's fair to say there are far more examples of libraries using social software from the United States, although where possible this report includes examples from the UK. The entries have been categorised by type of technology.

- **RSS feeds**

MIT Libraries http://libraries.mit.edu/help/rss/barton/
Using RSS feeds to highlight new books as these are added to the library catalogue. You can select a feed for the subject you are interested in and this can be added to any web page. This functionality could be particularly useful for adding feeds to subject web pages or directly into courses in the VLE. MIT Libraries also have a Libraries News feed and a feed for new theses added to their repository. They also maintain a useful link of RSS feeds for research which includes information about which publishers offer RSS feeds:
http://libraries.mit.edu/help/rss/feeds.html

Amazon has RSS feeds for new books on a huge variety of subjects which can be used in this way. More details about the Amazon feeds are available at:
http://www.amazon.com/gp/tagging/rss-help.html

LSE Centre for Learning Technology http://training.lse.ac.uk/
LSE's Centre for Learning Technology (CLT) used RSS feeds to bring together a range of different training events from different providers into one training website. CLT, IT Services, the Library and the Teaching and Learning Centre all maintained separate databases of training courses, however it is now possible to go to one website and see an aggregated list of training across the institution. CLT are also using a blog to feed news content onto their website. Any blog postings tagged as 'CLTNews' automatically appear on the home page in the news section. For more information see: http://clt.lse.ac.uk

Open University's Library feeds
The Open University have developed RSS feeds for a number of library resources, for example lists of new books and electronic resources are available as feeds. This type of feature can allow lecturers to pull library content into their own personal website, or into a course website such as one developed on a VLE.

- **Social Bookmarking tools**

University of Pennsylvania: http://tags.library.upenn.edu/
PennTags is a social bookmarking tool developed by librarians at the University of Pennsylvania for locating, organizing and sharing online resources. Users can collect and maintain URLs, links to journal articles and records in the library catalogue. They can develop bibliographies and reading lists which can be shared with the community. Users download a specialised toolbar or use a something called a 'bookmarklet' which allows content to be added to PennTags. At Pennsylvania the tool also allows users to tag library content found in the OPAC and the institutional repository.

- **User generated content in the catalogue**

Several libraries are experimenting with allowing user content to be added directly to the catalogue. This can include allowing users to add book reviews or other comments to the catalogue. Two examples are listed below:

Hennepin County Library
http://catalog.hclib.org/ipac20/ipac.jsp?session=117557C45YE78.21337&profile=elibrary&uri=link=3100006~!599888~!3100001~!310
Book reviews and discussion is facilitated in the Library catalogue. Users can comment on books and add reviews, similar to the functionality offered by Amazon, but also LibraryThing.

University of Huddersfield http://webcat.hud.ac.uk/
The University of Huddersfield have made use of web 2.0 technologies to enhance the library catalogue, including features such as user reviews and ratings, pulling content from Amazon into the catalogue. They have also added features such as making recommendations based on borrower records, so providing users with a link that says 'people who borrowed this book also borrowed…'

- **Blogs**

Lots of librarians seem to like writing personal blogs and there are several on the topic of web 2.0 which have a lot of useful information. A sample list of useful blogs on the topic of libraries and web 2.0 which were useful for the literature review includes:

Information Wants to be Free: http://meredith.wolfwater.com/wordpress/index.php
Dave Pattern's Blog http://www.daveyp.com/blog/
Peter Godwin's Web 2.0 and Information Literacy blog http://infolitweb.blogspot.com/
The Shifted Librarian http://www.theshiftedlibrarian.com/
Phil Bradley's Web 2.0 blog http://philbradley.typepad.com/i_want_to/
Are you 2.0 Yet? http://briangray.alablog.org/blog
Library Crunch http://www.librarycrunch.com/
Library 2.0: an academic perspective http://liblogs.albany.edu/library20/

Many libraries in the US are using organisational blogs for posting library news. Examples include:

Madison-Jefferson County Public library: http://mjcpl.org/
Ohio University Library Business Blog http://www.library.ohiou.edu/subjects/businessblog/
Kansas State University library blogs http://ksulib.typepad.com/

A list of example blogs by libraries was compiled as part of the 'Five weeks…' course. For more details see: http://www.sociallibraries.com/course/week1#examples Sauers (2006) also provides numerous examples of librarians who maintain blogs and includes considerable details about how to set one up.

- **Wikis**

Wikis have particular value for collaborative projects, for team building and for knowledge sharing. Anecdotal evidence suggests that Wikis are increasingly being used internally by organisations and LSE have established a number of Wikis used by staff in both the Centre for Learning Technology, for minutes and team meetings and by Library staff. A list of Wikis used by libraries is available as part of the 'Five weeks…' course. For more details see: http://www.sociallibraries.com/course/week3#examples

Library Success Wiki http://www.libsuccess.org/index.php?title=Main_Page
This wiki was developed by Meredith Farkas, who is the Distance Learning Librarian at Vermont. The wiki is a best practice tool, which was created to be a one-stop shop for ideas and information for all types of librarians. The wiki states:

> "All over the world, librarians are developing successful programs and doing innovative things with technology that no one outside of their library knows about. There are lots of great blogs out there sharing information about the profession, but there is no one place where all of this information is collected and organized. That's what we're trying to do."

The National Archives
http://yourarchives.nationalarchives.gov.uk/index.php?title=Home_page
The National Archives have recently added a wiki to their site to encourage users to add content to their site. Called 'Your Archives', they are encouraging people with knowledge of archival material to add content to the wiki.

- **Libraries and Social Networking**

Week 4 of the 'Five weeks..' course looked at social networking sites and the potential of Second Life, MySpace and Facebook for libraries. More details are available at: http://www.sociallibraries.com/course/week4. However there are a number of notable developments in this area. For example, Talis the library management supplier have funded

Cybrary, which is their headquarters in Second Life and anecdotal evidence suggests that several libraries are experimenting with offering services in Second Life.

Some libraries have also set up MySpace accounts, however social networking sites have had varying attitudes towards whether they officially allow this use . Library accounts on both MySpace and Facebook need to be created as if the Library is a person. For example see Brooklyn College Library which has over 3000 'friends' and is using the MySpace site to publicise various library activities: http://www.myspace.com/brooklyncollegelibrary.

It is also worth noting that a growing number of groups for librarians interested in all sorts of issues, but particularly web 2.0 developments, have been set up in social networking sites. Facebook has numerous groups that librarians are actively participating in (for example, the Library 2.0 Interest Group which also maintains a website: http://liswiki.org/wiki/Library_2.0 and the group called Librarians and Facebook which has over 1000 members). Facebook also has a number of library related applications that can be added to a personal profile to allow users to share reading lists, social bookmarks and other resources they are interested in. The social networking site Ning has a useful Library 2.0 group (see: http://library20.ning.com/) .

- **Other tools / technologies**

Hillsdale Teen Library
Uses Flickr to post pictures of events at the Teen Library.
http://www.flickr.com/photos/hillsdalelibraryteens

MIT Libraries
LibX – MIT Edition which is a Firefox tool that allows you to search various catalogues:
http://libraries.mit.edu/help/libx.html

Other issues of Library 2.0

Social software in libraries raises a number of other issues which will not be examined in great detail in this project, but which we'd like to flag up as being relevant and requiring further research. These include:

Staff development issues of web 2.0

Quite a lot has been written which is aimed at developing librarians skills and knowledge in the area of web 2.0 technologies. To familiarise them with the technologies and to raise awareness of their potential. Notable resources include the 'Five Weeks to a Social Library' course which ran last year. The resources are available on the web at: http://www.sociallibraries.com/course/

Privacy, IPR, copyright issues of social software
JISC highlighted these issues as being pertinent to the teaching and learning community and they are similarly relevant in the context of library developments. Storing personal data on remote systems raises obvious privacy issues, but IPR and copyright issues also need exploring

Technical and institutional barriers
The JISC report also highlighted technical barriers to using social software in educational establishments. Certain social software may conflict with security systems, or be blocked by firewalls. Institutional IT departments may be inherently opposed to the idea of social software.

Libraries and distance learners

This section of the literature review briefly examines the field of distance learning librarianship to provide context for the project and to identify the key issues in the field. Library support for distance learners is varied across academic institutions, however libraries increasingly recognise they need to provide specific support for the users that never or rarely visit the campus. Libraries also are starting to understand that distance learners face particular challenges when using library

resources. This has led some institutions, most frequently in the United States, to create new support roles such as a Distance Learning Librarian.

This section of the literature review will attempt to provide an overview of the current issues and challenges of providing library services to distance learners, to help us consider what solutions social software might offer.

Distance Learning: background and context

Distance education has a relatively long history and developed around the postal service which allowed educational materials to be distributed to individuals in more remote locations. It primarily served those who were unable to access traditional face to face classes and was pioneered in the 19th Century when correspondence courses developed by Isaac Pitman, to teach skills such as shorthand became hugely popular. The phenomenon is identified as originating in the UK by Bell & Tight (1993). However one of the first distance education universities was established in South Africa in 1946. Distance education became popular in countries such as Australia and the United States where huge distances often made it impractical for people to travel to educational establishments. Sometimes the only option for people would be to undertake education at a distance.

In the UK, the Open University is the most well known and well established provider of distance education. It was established in 1969, although first admitted students in 1971. From the outset it sought to use non traditional teaching methods, and pioneered the use of television for teaching. However, course materials have traditionally been distributed via the postal system when OU materials were developed in-house. Access to libraries in the early days was not assumed, and students were often provided with all the resources they needed. The OU now has over 180,000 students with more than 25,000 of them studying overseas, making it the UK's largest university. The OU has inspired the creation of many similar institutions throughout the world and since it was founded more than 3 million students have passed through its programmes.

The University of London's External Programme also ranks as one of the world's oldest distance education systems, as it was in fact established in 1858, when students from around the world were able to present themselves for university examinations. However, support for University of London external programme students was extremely minimal until the mid 1980s when a largely postal based system was developed to distribute course materials. Coleman (2004) provides a useful overview of the history and development of the External Programme in her article about the University moving into supporting students using online learning.

Distance education has traditionally relied on communications networks, such as post services, radio and subsequently television. However developments in computer technology in the last 10 years has led to an explosion in distance learning provision. Computers and the internet have allowed institutions to increase the number of part time programmes they can offer, but also to reach students who never attend a face to face class. Many universities are exploiting the global communications networks to establish programmes for students based around the world. The rise of e-learning support for face to face students has also led to a blurring of the distinction between full time face to face students and distance learners. 'Blended learning' is used in many institutions who are aware that campus based students have increasing pressures on their time and wish to access resources from off the campus.

The External System invested considerable resources in developing a proprietary based VLE to distribute course resources, however in 2006 they announced that they would be using Moodle, an open source VLE. The External Programme now serves over 36,000 students who are based around the world and courses are taught by different colleges in the University Of London. This means issues such as resources and library provision can vary quite significantly between courses. The largest programme is the Laws programme which accounts for almost 16,000 students.

Distance Learning Library services

Providing access to library services for distance learners is a fairly recent phenomenon. Traditionally students on distance education courses were sent materials by post, which often included a pack of reading materials. These invariably necessitated copyright clearance to allow material from published books and journals to be photocopied and distributed to students. The Open University has employed a rights manager for many years to deal with these and other issues. Many distance learning courses do not assume that students have access to a local library, and so all the required reading materials are supplied as part of the course.

Some libraries supporting distance learning introduced a postal loan system which allowed distance learning students to borrow material from the institutional library. However this is not without problems, as it often requires material being sent out on a more extended loan and can result in higher than average loss of stock.

Distance learning librarianship

Distance learning librarianship was until relatively recently a fairly niche profession, however the growing number of distance education programmes, particularly in the United States and Canada, has led to the development of a vibrant professional community. There are now a number of journals in the field, notably, the Journal of Library & Information Services in Distance Learning which was established in 2004 and is published by Haworth Press. Books to support professional practice in the area have also been published, for example Clayton (2007) which is a edited collection drawing on the experiences of over 20 distance instruction librarians from across the USA. Published by Facet in the UK, this was partly in recognition of the growing need for UK librarians to support distance learners.

Professional support in the US is also strong and provided by the Distance Learning Section of the American Library Association's Association of College and Research Libraries (ACRL). The Distance Learning Section present an annual award to the best Distance Education Librarian and have also developed the ACRL Guidelines for Distance Learning Library Services. The guidelines are available at: http://www.ala.org/ala/acrl/acrlstandards/guidelinesdistancelearning.htm and actually originated in 1963 as the "Guidelines for Library Services to Extension Students." They have been refined and developed many times since this date to appear in their current form. They make recommendations over issues such as the management, finance, facilities, resources and services that distance learning libraries should be offering to support students.

The Canadian Library Association (CLA) also provide detailed guidelines for library support for distance and distributed learners. These were first issued in 1993, but were revised in 2000 and are available online at: http://www.cla.ca/about/distance.htm . These guidelines were also developed by a special interest group of the CLA, known as the Services for Distance Learning Interest Group. They state they are modelled largely on the ACRL Guidelines. In Australia, their professional body, the Australian Library and Information Association, had a Distance Education Special Interest Group until 2000 and also published a journal, however this does not appear to exist any longer. Vare (2002) considered whether New Zealand required guidelines similar to those developed by the ACRL, but despite the recommendations in her thesis, these as yet have not been produced and there appears not to be a distance education special interest group in the New Zealand Library Association.

It is perhaps then no surprise that in the UK, there is no equivalent group in Chartered Institute of Librarians and Information Professionals (CILIP) to support distance learning librarians, although distance education might arguably be seen to come under the remit of the Education Librarians Group (ELG). SCONUL issued guidance for libraries supporting distance learners back in 2001, including a checklist for libraries over the type of services they should provide. (SCONUL, 2001) At the time the reciprocal access agreement, UK Libraries Plus, had just been launched, which allows distance learners to gain access to local academic libraries. The report emphasised the importance of these types of schemes although access to electronic resources and online support is also

discussed. The guidance has not been updated since 2001 and it is clear that more and more UK librarians are supporting remote users, whether they are traditional distance learners or students based away from the campus.

The Centre for Research in Library and Information Management (CERLIM) at Manchester Metropolitan University has very much led the way for research in this area in the UK. The 'Libraries Without Walls' conference was established in 1995 by CERLIM and has become an important event for distance learning librarianship outside the US. This conference attracts delegates from around the world and the conference is held in Lesbos, Greece. 2007. The Institute of Education also funded research into this topic in 2004 when the Student Support Librarian was seconded to carry out an internal study of "Information Services' support for Distance and Flexible Learning". (Price, 2004).

However, it is arguably the Open University (OU) who have also pioneered developments in library support for distance education in the UK, launching initiatives such as MyOpenLibrary, which provides students with a personal library page of the most relevant resources for their course. The OU also maintain a physical library at the Walton campus in Milton Keynes, however most of the support is online through the library website. Student support has also been key at the OU, who pioneered the use of the FirstClass computer conferencing system in the 1990s on many courses to support students. In 2006 the OU announced they would be using Moodle, the open source VLE, to support all their courses. They are investing £5 million in the development of the Moodle system and have 10 enhancement projects currently underway, 2 of which are led by the Library. Of most relevance to this project is the Library Integration Project which is piloting a system that enables course teams to deliver RSS feeds of Library resources directly to their course pages in Moodle. Library staff are also working on the eportfolio module of Moodle to enable students to save and tag their own collections of Library resources. Staff believe these 2 initiatives will ultimately replace MyOpenLibrary, providing personalised access to library resources through the VLE. However, they are assessing how some of its functionality might help with personalisation of the new Open Library 2.0 website which will be made available during 2007/08.

The OU Library employs 90 members of staff. Electronic resources are obviously crucial to support distance learners, however information literacy is also a key role for library staff. The OU has developed several significant online information literacy tutorials such as MOSIAC and SAFARI. However most recently Parker (2007) described how the OU Library have recently had a significant input into the development of a new, 10-point information literacy course that anyone can take, entitled 'Beyond Google'. The OU have also been exploring Elgg, the social networking site as a possible way to support distance learning tutors. The PROWE project which is funded by JISC is using Elgg as a platform to support distance learning tutors. Further information is available on the project website: http://www.prowe.ac.uk/

Distance learning and e-learning support

However more and more we are seeing services that support distance learners as being closely linked to libraries support for e-learning. JISC recognised the importance of research in this area in 2002 when they launched the Digital Library and Virtual Learning Environment (DiVLE) Programme. Ten projects to look at integrating library resources and e-learning was launched. However, although the projects explored technical and interoperability issues, it is not clear that importance of library support from within VLEs was formally embedded into institutionally policies. Secker (2004) felt that integration offered required manual intervention from library staff, who could sometimes be locked out of the VLE or bypassed. Research from the JUSTEIS project in 2004 suggested that library websites and resources are often under-used by students, who prefer to rely on Google or information provided in the VLE.

Some progress has been made since 2004 and Secker (2004) highlighted the need for library staff to engage with the e-learning community and establish a presence in the VLE. Many libraries now provide reading list information in the VLE, or include links to library resources. Information literacy education is also an area where librarians have developed a presence in the VLE. Many

universities offer a library training module through the VLE, covering issues such as advanced use of the internet, citing and referencing and tackling plagiarism. Yet ideally this should be embedded into academic courses not in separate library modules which students will may be less likely to find and use. However, to date there has been little evaluative research on how libraries resources are accessed from students in virtual learning environment and whether placing material in the VLE encourages use.

It is also worth mentioning mobile learning (m-learning), as many working in the e-learning field recognise that mobile learning may well be the future. Hand-held mobile devices are becoming increasingly prolific and particularly in areas where broadband connectivity has been problematic (for example sub-Saharan Africa) but where mobile phone coverage is very strong, these are becoming the key technology. In fact the first International M-Libraries Conference is being hosted at the Open University in November 2007 and it aims to:

…explore and share work carried out in libraries around the world to deliver services and resources to users 'on the move,' via a growing plethora of mobile and hand-held devices.

For more information about this conference see: http://library.open.ac.uk/mLibraries/

Current issues in distance learning librarianship

Supporting students who never or rarely visit a physical library can be challenging and there is a vast amount of literature on this topic. The Libraries Without Walls conference in 2005 recognised that library services for distance learners are often pushing back new frontiers and that helping students utilise electronic resources is a crucial role for distance learning libraries. In 2005 the conference wanted to focus evaluation and measuring the positive impact library services for distance learners might be having on users.

In general we have identified four key areas seem to be crucial when supporting distance learners:

- Collection building: providing students with access to a wide range of reading materials meaning course packs or ‘readers’ are often heavily relied on. This can lead to The serendipity of browsing library shelves and meeting other students on one’s course who direct you to relevant resources.
- Information Literacy / Library instruction: Building up student’s knowledge of the library collections, both paper but particularly electronic resources can be challenging without orientation sessions in the library. There is a lot of literature on information literacy and distance learners and a focus on developing online tutorials for distance learners.
- Providing document services: This includes providing services to distance learners such as document delivery and inter-library loans but also includes Accessing electronic resources from off campus which can be problematic, particularly as one has little control on the students PC configuration and choice of browser. This can lead to password problems particularly when students don’t know the correct route to access resources
- Providing timely student support: for queries and problems they encounter while using library resources – this often relies on e-mail and telephone support but some students may be studying in different time zones so this can present a challenge.

These four areas allow us to focus on specific library activities and consider throughout the course of the LASSIE project, whether social software can provide additional support to distance learners using library services. However, underpinning this must surely be the need to evaluate whether the services we provide are supporting students learning, helping them engage with their subject and develop their skills to become lifelong learners.

Libraries as social spaces

Introduction

This final section of the literature review looks at the role of the library as a social space and 21st century attitudes towards libraries as a physical space on the university campus. Some might imagine that the vast growth in the number of electronic resources has led to a declining interest in library buildings, however, there has been a resurgence of interest, as the literature shows. This section also briefly examines the changing nature of learning spaces more generally in higher education, as the changes and developments in teaching methods are directly relevant to the changing role of libraries. This section concludes by looking at issues such as whether physical libraries do in fact serve a wider social function that is lost when users access virtual libraries. It then considers whether social software might in some way help to support this role.

Changing learning spaces

Physical learning spaces throughout our schools and universities are changing in appearance, partly in reflection of more wider changes in teaching methods. The impact of technology on the classroom is also acting as a catalyst for change, as interactive whiteboards, wireless access and the use of computers becomes increasingly common. Traditionally university teaching centred around the large lecture theatre, where students attended to passively listen and take notes. While lectures are still a central part of university life, in the 21st century, teaching methods have diversified as the range of subjects has developed. As our understanding of pedagogy and learning styles has developed, the idea of the 'sage on the stage' has fallen out of favour in some circles as educationalists encourage lecturers to view learning as an active process where teachers are facilitators of learning. Many subjects are now taught in smaller groups, in laboratories or require students to work together collaboratively on joint projects. This has led to changes in higher education requirements for learning spaces. In 2006 JISC recognised this change with the launch of the publication "Designing Spaces for Effective Learning" (JISC, 2006). This report has been followed by a literature review, funded by the Higher Education Academy, and undertaken by the Institute of Education on 'Learning spaces for the 21st Century' (Temple, 2007). The review is due out in Autumn 2007 and emphasises the recent focus on developing new learning spaces that reflect changes that are happening in educational practice, largely driven by technology. Finally SCONUL (Standing Council for National and University Libraries) recognise space planning as a current 'hot topic' and have a working group looking into how libraries '*identify the challenges for flexible learning and research space in an increasingly e-environment'*. (SCONUL, 2007)

Changes in library buildings

The move towards an increasingly digital library started in the 1970s and accelerated considerably in the 1990s with research programmes such as eLib in the UK and the Digital Libraries Programme in the US. By the end of the last millennium Rusbridge (1998) recognised we were moving towards what he called the 'hybrid' library rather than an exclusively digital library. This has meant for some time digital library developments have occurred in parallel with ongoing interest in library buildings. The belief in some quarters that libraries as a place are redundant and that users just want to access resources remotely has been firmly challenged by the library profession and the idea of the Library as a social space is gaining increasing recognition more recently. This development is linked to two related ideas about library space which have gained ground in library literature more recently: "The Library As Place" and the library as the "third place". Librarians sometimes call the library a "third place," a reference to a theme in Ray Oldenburg's book *The Great Good Place*. Oldenburg is a professor of sociology at the University of West Florida, and he lamented the disappearance of good public places. Oldenburg argues that society desperately needs third places -- that are neither home (the first place) nor work (the second), but spaces that allow people from different parts of a community to come together and engage one another. Many public libraries in the US and more recently in the UK, are capitalising on this idea and seeing themselves as playing an important role as a 'third place'. The funding to put in place the IT infrastructure in UK public libraries (Known as the People's Network) means that public libraries all have internet access and provide an alternative to internet cafes. Many are also extending their

opening hours, providing drinking and eating facilities and trying to shake off their image of being simply places of books.

The second concept of "The library as place" became a buzz phrase in many US library-planning meetings a few years back and it was also the title of a series of essays published by the Council on Library and Information Resources (CLIR) (For more details see: http://www.clir.org/PUBS/reports/pub129/pub129.pdf). In 2005 'library as place' was also the theme of a panel discussion at the American Library Association conference (see: http://www.ala.org/ala/pio/piopresskits/alaannualconferencepresskit2005/librarysplace.htm), and the title of a conference organised by the National Library of Medicine." The importance of the library as a physical space was emphasised by Carlson (2005), who described how a professor of engineering at Pennsylvania State University told his University Director that the brand new $15 million library building was a shame 'because everything was on the Internet'. He strongly argues that libraries as a place are important in the digital age. In the UK over the past few years we have seen considerable investment in many flagship new library buildings, for example the Jubliee Library in Brighton, the Ideas Store in East London and the new library in Peckham, South London. Yet we are also living in a period of government and local authority cuts which are badly affecting some library services in both the US and the UK. As Brophy (2001) concludes in his monograph on the future library "it is easy, in the excitement of cyberspace, to lose sight of the fact that physical places remain important and are where people actually live out their lives" (Brophy, 2001, p.183)

The idea of 'library as place' very much challenges the notion that users simply want access to library resources, and are not concerned about a physical environment. Librarians are understandably defensive of their spaces, and the information literacy movement is particularly eager to challenge the belief that libraries and librarians are redundant because everything can be found on the internet. In fact, in a recent book on Digital Literacies a non library author argues that the idea of the internet as a Digital Library is a 'fallacy' and that viewing it as such as led researchers to become less effective when using more traditional data sources. (Gilster, p.48 in Allan & Madigan, 2006).

Information commons

Linked to the resurgence of libraries as physical space is the phenomena for building new, innovative library spaces . In the US, Canada and Australasia there have been a number of "Information Commons" built which provide flexible learning spaces incorporating library, IT and other student services. These buildings are usually built as separate projects to the library and often only include high demand paper collections (such as short loan collections) along with flexible space for group study, areas where students can talk, text, and use their phones, and quieter study spaces more akin to a traditional library. Information Commons have a high number of desktop PCs and space for laptops as accessing electronic resources is common. User-support can be provided by traditional enquiry desks but also may include floor walkers who can trouble shoot IT and library problems. Information literacy and library training are often important components of these buildings. Beagle (2006) published The Information Commons Handbook, which provides an overview of their history, role and includes valuable details for those involved in planning an information commons. The Canadian Library Association also have a special interest group devoted to the subject and maintain a wiki. (Canadian Library Association, 2007).

In the UK a similar initiative was the Saltire Centre at Glasgow Caledonian University which opened in 2006 and provides a flexible learning space. It is now home to many of the University's library staff and was described in some detail in a recent article in CILIP *Update* by Howden (2007). The same issue of *Update* also reported on librarians involvement in developing a flexible learning space at the University of the Arts (Christie and Everitt, 2007). The first UK Information Commons opened in April 2007 at the University of Sheffield, again a distinct building from the library. It is described as:

> "More than a library, more than a study space, more than an IT centre; the whole is greater than the sum of the parts. So the Information Commons deserved a new name for a new concept." (University of Sheffield, 2007)

Advocates of Information Commons are clear that these buildings are not libraries, but new learning spaces designed with learners at the heart.

"The library is the one thing that stands for the kind of culture and learning for which universities are noted," says Michael Gorman, dean of library services at California State University at Fresno and former president of the American Library Association. "When you look at the glossy brochures that universities put out, hoping to attract funds, they always feature people reading in the library, because there is something iconic about that." Gorman calls the library the "great intellectual and cultural center" of the academic community.

Conclusion

Social software and web 2.0 technologies seem to offer enormous potential for the library community, as they do for the education community more widely. There is a tremendous excitement and new tools are currently being developed all the time. Advocates of web 2.0 technologies such as Bradley (2007) and Farkas (2007) argue that librarians should start experimenting and using these tools to enhance the services they offer. However, it is useful at this time to reflect on the experiences to date, to consider the central purpose of libraries and then to select tools that really do make a difference to our users.

The literature review highlighted that our library buildings serve an important role as a physical space where learning and interaction takes place. Literature in this field has helped to shape our thinking about the value of social software for libraries and whether there is a specific social function that could be replicated for those unable to visit the building. It is clear that collaboration and communication has become increasingly important in the way we learn and our new library buildings are starting to reflect this shift. The role of the librarian as the facilitator of collaboration and communication could become crucial in the Web 2.0 world. It is also worth noting that in virtual worlds, notably Second Life, many organisations, including libraries have embarked on building learning spaces such as libraries. Individuals who use Second Life also report on visiting these places and so the role of the virtual and physical library becomes increasingly interesting and increasingly blurred.

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