# Results and analysis of Web 2.0 services survey

## Project Information

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<thead>
<tr>
<th>Project Acronym</th>
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<td>Secure Personal Institutional and Inter-Institutional Repository Environment</td>
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<td>01 June 2005</td>
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<tr>
<td>Project Director</td>
<td>Mr Sean Faughnan</td>
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</table>
| Project Manager & contact details | Mr David White  
Senior Development Manager  
Technology-Assisted Lifelong Learning (TALL)  
University of Oxford  
Department for Continuing Education  
Ewert House, Ewert Place  
Summertown, Oxford OX2 7DD  
Tel: (01865) 280989  
E-mail: david.white@conted.ox.ac.uk |
| Partner Institutions | Penn State University |
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| Programme Name (and number) | Digital Repositories Programme |
| Programme Manager | Dr Neil Jacobs (n.jacobs@jisc.ac.uk) |

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Results and analysis of the Web 2.0 services survey undertaken by the SPIRE project

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The SPIRE project was funded by the Joint Information Systems Committee (JISC) over a period of 22 months (from June 2005 to March 2007) to explore the implementation and use of ‘informal repositories’. The underlying focus of the project was on informal sharing and new methods of finding and using online resources for elearning. The project originally planned to encourage an early adopter community to use the LionShare open source peer-to-peer (P2P) system developed by the Pennsylvania State University. However, for a number of technical reasons it proved impossible to set-up the LionShare infrastructure in the UK. During the project, the popularity and diversity of Web 2.0 type services on the web began to increase. Many of these services involve informal collaboration and sharing so, in the light of this, the SPIRE project shifted its focus from specifically looking at P2P towards a more general investigation of the use of informal participatory services. (The rationale for this change of direction is discussed in detail in the SPIRE change report1.)

JISC agreed that a survey looking into the popularity and usage of Web 2.0 services would act as a useful guide for the recommendation and strategic implementation of this new genre of services. It was also an opportunity to acquire some quantitative data on the uptake of such services.

The SPIRE Web 2.0 services survey was designed in autumn 2006 and opened on 1 December 2006. The survey remained open for 11 weeks and was closed on 16 February 2007. During this period, the survey was completed by 1369 respondents2. Initially, the survey was advertised to students studying online short courses provided by the University of Oxford's Department for Continuing Education, and later it was advertised on the homepage of the University of Oxford’s online courses page3 which promotes all the online and distance learning courses offered by the University. This page receives a lot of traffic and around 90 percent of respondents came to the survey via this route.

The link from this webpage provided a wide range of respondents across a large demographic, only about 10 percent of respondents where HE students at the time. It should be taken into account however that the majority of respondents probably had some interest in leaning online to have initially discovered the page.

A second version of the survey was sent out to academics who teach on the University of Oxford Department for Continuing Education’s weekly classes programme. This version of the survey asked a number of more focused questions about the discipline and level of teaching the respondent undertook. The weekly class tutors were chosen as a useful group as they work on a part-time basis and represent a wide range of academic institutions and states of academic employment. This version of the survey received 46 responses4.

Both versions of the survey were produced and run using the Survey Monkey service5. This service was chosen on the recommendation of Oxford University Computing Services, who had used the service successfully in the past. The survey was designed, as far as possible, on a checkbox model to make it faster for respondents to complete and so that the binary style filtering functionality provided by Survey Monkey could be used to analyse the data. This approach is primarily quantitative and was designed to discover general levels of

1  http://spire.conted.ox.ac.uk/trac_images/spire/SPIREchangereport191006.doc
2  A complete version of the SPIRE Web 2.0 services survey results are available from: http://www.surveymonkey.com/sr.aspx?sm=b7bcRv56gcNyokpX3JK8qeEWRmAlq5a0k19bQyA0qw_3d
3  http://onlinecourses.conted.ox.ac.uk/
4  A complete version of the SPIRE Web 2.0 services survey results from the version of the survey sent to Weekly Classes tutors is available from: http://www.surveymonkey.com/sr.aspx?sm=lg1pXCC8OChfn9It5HV5SXrmG5580mBtH1Ra_2bsLJgMk_3d
5  http://www.surveymonkey.com
usage and in what context the services are being used (e.g. for work, for study or socially/for fun). The aim of the survey was to discover whether patterns of usage could be established that could be used to inform what type of Web 2.0 services could be adopted by educational institutions for informal sharing and/or collaboration.

There are a number of weaknesses with the format of the survey. In hindsight it would have been useful to have included grouping services, such as Yahoo! Groups and Google Groups, as the functionality of these services is similar to LionShare. It would also have been useful to have included a section on aggregation services and popular ‘mash-ups’. These types of services work on the basis of linking and contextualising (or recontextualising) which map closely to the principles IMS Learning Design (IMS-LD) offers\(^6\). Some of the services are referred to in the survey using specific examples, such as Flickr and Wikipedia, whereas other services were referred to as a general type such as blogs or wikis. This means that care should be taken when comparing the survey results for general levels of popularity. Overall the results are a good indication of general trends.

A number of follow up questions were sent via email to selected participants to discover there motivation for using, or choosing not to use, certain services. Sixteen respondents were emailed with appropriate questions and 11 responded. An anonymised version of their responses is provided in Appendix A. A summary of the survey results can be downloaded from: http://spire.conted.ox.ac.uk/trac_images/spire/surveySummary.pdf.

All of the charts in this report have been constructed as percentages of the data. To give a foundation to this approach I include the actual numbers of respondents in each age range below:

<table>
<thead>
<tr>
<th>Age range</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18</td>
<td>5.6%</td>
<td>77</td>
</tr>
<tr>
<td>18-24</td>
<td>25.9%</td>
<td>353</td>
</tr>
<tr>
<td>25-34</td>
<td>28.1%</td>
<td>383</td>
</tr>
<tr>
<td>35-44</td>
<td>17.6%</td>
<td>240</td>
</tr>
<tr>
<td>45-54</td>
<td>12.5%</td>
<td>170</td>
</tr>
<tr>
<td>55-64</td>
<td>7.4%</td>
<td>101</td>
</tr>
<tr>
<td>65-74</td>
<td>2.6%</td>
<td>35</td>
</tr>
<tr>
<td>75-84</td>
<td>0.4%</td>
<td>5</td>
</tr>
<tr>
<td>85+</td>
<td>0.1%</td>
<td>1</td>
</tr>
</tbody>
</table>

The low responses from those older than 74 precluded them from the percentage based approach. To view a summary of the full data please go to http://www.surveymonkey.com/sr.aspx?sm=b7bcrV56qcNyokpX5JkK8geEwBRmAlq5a0k19bQyA0qw_3d

The first two figures below show general levels and types of usage. They are best discussed in tandem.

\(^6\) Currently these services don’t include ‘roles’ as IMS-LD does.
**General Levels of Usage**

Figure 1: Percentage usage of services across age bands (circa 1050 responses to each service).
Types of Usage

**Figure 2:** Proportion of usage type
**Construction of figures 1 and 2**

Respondents were asked the following questions about each of the tools / services above:

‘Do you use this tool / service:
- For work
- For study
- Socially / for fun
- Never used it
- Never heard of it

Respondents could check more than one answer. Figure 1 was created by adding together responses to ‘Never heard of it’ and ‘Never used it’ and subtracting this sum from the total number of respondents to that question. This was then turned into a usage percentage.

This method does contain some mathematical flaws but these are limited in there effect in a sample of circa 1300. Figure1 should be used as evidence for general trends and cannot be relied on for accurate cross-service comparison. For example, the survey did not ask if respondents used the service regularly. It is possible that the apparent high engagement of the under 18 age group is because they are more likely to ‘brush past’ a service when surfing but not necessary use that service more than a couple of times. Nevertheless, it is clear that the under 18 age group do generally use Web 2.0 services the most.

Figure 2 is a simple representation of the context in which the survey respondents were using Web 2.0 services. It is worth remembering that many respondents will have checked more than one usage type for any single service.

Interpreting the data is best done by cross referencing these two figures.

**Interpretation of figures 1 and 2**

**Wikipedia**

It is immediately clear that Wikipedia is very popular with usage ranging between 70 and 84 percent across all age groups. This is mainly individuals reading content rather than contributing, although the ratio of contribution to lurking across all collaborative authoring tools is 1 to 4. Around 50 percent of Wikipedia use is for study, which represents a huge amount of students and researchers who probably use Wikipedia as there first (and possibly only) source of reference. Institutions need to recognise the popularity of Wikipedia and teach students how to use the service in combination with other research techniques. Ignoring the popularity of Wikipedia or making arguments about its quality is not an effective response to the popularity of this service.

**‘Silver Surfers’**

It is interesting to note that there is resurgence in the use of Wikipedia amongst the 65-74 age group. This also occurs with a number of the social games/spaces and to a lesser extent with the social networking, blog/aggregation services and Skype. This could be attributed to users having more time to engage in online communities during retirement.

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7 The main one being generated by respondents who check multiple answers against each service. This option was given to allow the collection of useful data on the manner in which services where used: socially/for fun, for work or for study.
8 See figure 6.
“Generally, without the web, life would be much poorer, especially for someone like me who is semi retired. Excellent way of continuing to engage, springboard for other activities, marketing business and saving communication time due to ease of availability of information.” Email interview respondent.

Blogs
The next most popular form of viewing text-based information seems to be reading blogs. One surprise here is the volume of respondents who claim to write their own blog. The greatest proportion of these blogs are written ‘socially / for fun’ (61 percent) with the remaining 39 percent being written ‘for study’ or ‘for work’. Some blogs are considered to be a combination of these categories. We don’t know how successful in terms of dissemination / collaboration these blogs are or how often posts are made but it should be noted that writing and reading blogs is no longer a niche activity.

Aggregation
Aggregation services, such as Technocrati and Bloglines, are less popular leading to the conclusion that most survey respondents read blogs individually rather than as feeds. This is supported by the relatively low use of RSS feeds (although this may also have been affected in the survey because of it being referred to as a technical standard rather than as a service, such as using iTunes, to subscribe to podcasts). The overall indication here is that feed aggregation and modification is not in the main stream yet, which leaves a window of opportunity for the development of ingenious feed services such as the recent Yahoo! Pipes9.

Distribution of usage type
Much talked about organisational/sharing services, such as del.icio.us and Flickr, were not as popular as expected relative to the other services. This has to be balanced with the fact that the survey asks about specific services here rather than using a general type as it does when referring to blogs10. The most popular use of del.icio.us is for study. It is interesting to note that in social bookmarking, file sharing, use of online calendars (not including the office suite based Outlook) and image sharing the proportional distribution between the types of usage remains the same within each category of service. This would indicate that the balance of usage will remain the same as the service becomes more or less popular.

Informal communication
MSM Messenger is also popular, with decline in use mirroring closely the overall reduction in usage as age increases (see figure 3). There is clearly a lot of informal communication taking place over the web outside of email. The popularity of Skype also indicates this. Both MSN Messenger and Skype are based around the informal peer group and, as figure 2 shows, the dominant form of usage for both tools is ‘socially/for fun’. It is likely that these types of services will increasing become part of peoples working lives over the next few years.

More formal communication
Discussion forums are a popular medium for more formal communication, with the proportion of usage ‘for study’ and ‘socially / for fun’ being approximately 25 percent in each case. This result may have been skewed slightly by the circa 140 respondents who have

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10 The survey did ask if respondents had used any similar services that were not mentioned. In most cases there were not many as the services mentioned in the survey were generally very high profile.
been students on the University of Oxford’s short online courses, which are based around discussion forums.

The move away from the desktop
The popularity of Google Calendar and Yahoo! Calendar relative to Microsoft’s Outlook calendar\textsuperscript{11} is significant and could indicate a move away from the desktop for ‘office’ suite applications. The attraction is due to accessibility and the fact that they are free to use. It is probably also due to the fact these services are a simple recreation of existing software paradigms into a Web2.0 format. Users do not need to be convinced that a calendar or a word processor is of use and don’t have to change their working practices to take advantage of the benefits of a Web2.0 version of such an application. This is in contrast to services such as image sharing service or feed aggregation services which represent new forms of practice. It is likely that this trend of traditionally desktop-based software moving to the web will continue for applications such as word processing and spreadsheets. The low levels of usage of Writely (now part of Google Docs and Spreadsheets) and Rallypoint could be an initial indication of this trend. Web-based mail, which was not included in this survey, is at the forefront of this shift. A number of educational institutions are considering not providing institutional email addresses for students as a high proportion of them simply forward this address to their web-based mail accounts. Other services also bring into question the role of the institution in providing services, for example, at the University of Oxford it is said that currently 15 percent of all email traffic is mediated via FaceBook.

It’s not all kids
The level of engagement with MySpace and YouTube shows a similar pattern across the age groups, and there is a fairly linear drop off as age increases. This demonstrates that these services are not exclusively used by the young. The decline in usage as age increases could be due to a number of reasons, including:

1. These services are mainly marketed to the young.
2. Younger users are more likely to be part of multiple online communities.
3. These services have emerged recently and younger users are more likely to simply build these services into there use of the Internet when they initially go online.
4. The popular content used by many of these services is generally more appropriate for the young.

The usage pattern by age group, as shown in the results of the survey, undermines the widely held theory of point 3 above. However, given that MySpace and YouTube have only emerged in the last 2-3 years, an 18 year-old who has been surfing since the age of 10 is already not a ‘native’ to these services, or indeed almost all of the services referenced in the survey. It is also worth noting that while the most popular content that appears on the home pages of these types of sites is mainly aimed at a younger audience, there is a ‘long tail’ of content that is viewed less often but by a wider range of users. Because I have worked in terms of ratios of use I cannot be definitive however it would appear that the largest proportion of users in both MySpace and YouTube are older than 25. This is contrary to the widely held assumptions about the ‘digital native’ in these services being relatively young. Nevertheless the largest and therefore the most prominent groups are younger than 25.

\textsuperscript{11} It was decided that although Outlook Calendar is desktop-based it could act as a good reference point for the calendaring section of the survey.
The context in which Web 2.0 services are used is broadening

The context within which Web 2.0 services are being used is broadening with many respondents using tools such as Wikipedia and Skype for work, study and socially/for fun. This new breed of tools allows the boundaries between work and play to be blurred.

New widget-based ‘homepage’ services allow users to easily cluster together a range of information streams and functionality that could relate to a number of the roles they occupy in day-to-day life. Institutional systems need to find ways of connecting with this type of service to ensure that they stay relevant and become part of the ‘attention landscape’ that individuals are now constructing.

**Overall engagement**

![Bar chart showing overall percentage usage of tools and services across age groups]

*Figure 3: Overall percentage usage of tools and services across age groups*

The chart above shows the survey results in green and a prediction of what the results of a similar survey might look like in 2-3 years time. The actual increase in volume of usage is not being predicted here. The flattening of the decline in usage between 18 and 34 year-olds is the important aspect to consider. It is likely that the take-up among the young will remain strong and will ripple through as individuals move through the age groups.
Institutional Trends

Figure 4: Percentage usage trends for institutional services across age

The above chart is useful for comparison with the use of the Web 2.0 related services. The question asked on the survey was simply: ‘Which of these online tools, which may be provided by your educational institution, do you use regularly?’ rather than the more complex format used for the Web 2.0 related services which asked what respondents used the tool for. This means that the above figure can’t be used as a volume of use indicator for some sort of popularity comparison with figure 1; figure 4 only shows general trends. To clarify this, see the table below which shows a small selection of numerical responses.

<table>
<thead>
<tr>
<th>Service</th>
<th>Regularly Use</th>
<th>For Work</th>
<th>For Study</th>
<th>For Fun /Socially</th>
<th>Never Used It</th>
<th>Never Heard Of It</th>
<th>Total Numerical Usage Response for the Service</th>
</tr>
</thead>
<tbody>
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<td>Institutional email</td>
<td>301</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>301</td>
</tr>
<tr>
<td>Institutional VLE</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>236</td>
</tr>
<tr>
<td>Wikipedia</td>
<td>310</td>
<td>556</td>
<td>389</td>
<td>144</td>
<td>126</td>
<td>1255</td>
<td>1255</td>
</tr>
<tr>
<td>Google Calendar</td>
<td>133</td>
<td>161</td>
<td>159</td>
<td>474</td>
<td>150</td>
<td>453</td>
<td>518</td>
</tr>
<tr>
<td>Flickr</td>
<td>32</td>
<td>32</td>
<td>126</td>
<td>318</td>
<td>518</td>
<td>190</td>
<td>190</td>
</tr>
</tbody>
</table>
Any numerical comparisons are further complicated because the Web 2.0 services section of the survey allowed respondents to check multiple boxes. For example, in the case of Wikipedia there were a total of 1076 responses but 1525 boxes checked, indicating that many people use Wikipedia in a number of contexts. It is also difficult to ascertain how many respondents checked both the boxes ‘Never used it’ and ‘Never heard of it’.

All the institutional services inherently have lower response rates because not all of the survey respondents will have been attached to an education institutional at the time of completing the survey. Nevertheless, we can infer from the above chart that use of institutional services is evenly spread across age group, with the exception for the under 18s, who presumably are not yet members of a tertiary educational institution offering these kinds of services.

![Bar chart showing percentage usage of institutional services by age group](image)

*Figure 5: Percentage usage of institutional services by age group*

The even distribution in the above chart shows that institutional services form an important part of the online services used by the survey respondents. The challenge is to find ways of linking institutional services with the ever expanding online environment that users engage with on the Internet. This is especially pertinent given that a significant amount of the Web 2.0 services covered by the survey are being used for study purposes.
Respondents were asked if they contributed to each group of tools or simply viewed the material offered. This was an attempt to find out the ratio of contributors to ‘lurkers’. The fact that this question was only asked after groups of services and not after individual services produced what seem to be unreliable results. Also, the concept of contribution is subjective. Recent research in this area distinguishes between ‘comments’ and ‘content creation’.

“It's an emerging rule of thumb that suggests that if you get a group of 100 people online then one will create content, 10 will “interact” with it (commenting or offering improvements) and the other 89 will just view it. It's a meme that emerges strongly in statistics from YouTube, which in just 18 months has gone from zero to 60% of all online video viewing.” Guardian Online 20 July 2006.

The survey results show a much higher level of contribution than this, with 20 percent of respondents who use MySpace and YouTube contributing in some form. This could be indicative of a general increase in this area, but is probably an effect of this aspect of the survey being too simplistic. This area requires more research especially into what motivates individuals to comment or create new content. As the focus in elearning shifts increasingly towards collaboration and the provision of online social spaces, the issue of how to encourage students to move from being ‘lurkers’ to active participants is crucial. The follow-up email interviews carried out after the survey were designed to gain an insight into this issue, but are not very comprehensive.
Figure 7: Percentage usage of services showing a comparison between tutor, teacher and student usage
The ‘OUDCE Weekly Class Tutors’ results in figure 7 come from the slightly modified version of the survey sent to Oxford University Department for Continuing Education (OUDCE) tutors who teach on the weekly classes programme. The weekly classes programme offers a wide range of undergraduate level-one courses to the general public, and, as mentioned previously, the 46 respondents to this version of the survey represent a
wide range of disciplines; from theology to physics, philosophy to neuroscience and town planning to Spanish. Of those whose work involved online collaboration 54 percent said this was only by email. Email is the primary method used for sharing and online collaboration, and will probably remain so as institutional culture has become normalised to it. However, email is not always the most effective technology for collaboration and is often used beyond its capabilities for project planning and organisation. This is especially true in relation to file sharing and version control.

The green bars in figure 7 are respondents from the main survey whose profession was marked as ‘Teacher’. This category of respondents will represent a wide range of roles across the education spectrum in both level and style. It is included to act as a comparison with the HE-level tutors of OUDCE.

It is of course possible to be represented in both the teaching and studying categories. The open nature of this survey means that no category has clearly defined edges. The overall popularity of the services generally follows the pattern set in figure 1, which demonstrates that the majority of these services are not specialist or niche. The general uptake by the HE tutors of OUDCE is lower than the other groups, except for the use of Wikipedia, which seems to be popular across a wide range of academic levels (see figure 8). One of the significant differences between the HE tutors and the other groups is that none of the HE tutors use either the Technocrati or Bloglines aggregation services, despite many of them indicating that they read blogs. This could be because other aggregation services are being used but it’s more likely that the sophisticated management of the flow of information via feeds is not part of ‘traditional’ HE teaching culture yet.

Overall, students use Web 2.0 services more that HE tutors or teachers; however, the differential is not that great and can probably be accounted for by the lower average age of students.

**Feedback from blogging the survey results**

At the suggestion of Neil Jacobs, the JISC Digital Repositories Project Manager, I posted the results from the survey, without supporting analysis, to the Technology-Assisted Lifelong Learning blog\(^{12}\). The blog post was picked-up by numerous elearning blogs and the data was commented on and used by researchers around the world. The data was interpreted in a variety of ways, some of which are useful to discuss here.

The notion that these services are the preserve of the young was raised in a number of cases referencing the survey data. A specific example of this was brought up by Dr Terry Anderson, the keynote speaker at ‘The Shock of the Social’ conference held in Oxford on 22 March 2007. Dr Terry Anderson used the two overall usage charts for Web2.0 services and institutional services to demonstrate that the new web-based services are being used by the young whilst more traditional services provided by universities are used more by older individuals. This, he clamed, pointed to an impending culture clash and evidence of the disconnect between institutional culture and what is taking place out on the web. While the data does partially support this view point, I would argue that the situation is more complex and that the take-up of Web 2.0 services cannot be seen simply as the preserve of the young.

The data on lurking was popular and commented on in a number of blogs. While it was clear in my post that I thought that this aspect of the survey was the least reliable it did

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\(^{12}\) [http://tallblog.conted.ox.ac.uk/index.php/2007/03/16/some-real-data-on-web-20-use/]
seem to be of interest. This points to the fact that the concept of lurking, and by association collaboration, are currently not understood well and would benefit from further research.

"I've been looking for some research that confirms that the lurker to participant ratio in online communities... holds true for some web2.0 online communities, like tagging communities, digg communities, and others. Ha, I found something on page 8 and illustrated by the above chart."


There was also interest in the apparently high levels of blogging made evident by the survey:

"Blogs also feature large - their use is analysed in a little more detail, with the results indicating that they really must be taken seriously in terms of how they are used to share knowledge."

Derek’s Blog 24 March 2007 (http://blog.core-ed.net/derek/2007/03/real_data_on_web20_use.html)

I also received an email from a member of staff based at the Australian National University who wanted to know what effects these types of services might have on education in general, especially with the emergence of Google apps. He was intrigued by the fact that most of their students used WebMail in preference to desktop applications and felt that this might be an indication of a move away from the desktop.

The process of blogging the results of the survey, and receiving feedback, was very useful and informed the writing of this report. This process in itself is a good demonstration of how Web 2.0 services can be used for research and scholarly activity.

**Follow-up email interviews**

Sixteen respondents were chosen for follow up email interviews, and 10 of those contacted responded. The questions were designed for and sent to three groups.

1. Users who had chosen not to use any of the services referred to in the survey or who appeared to be unaware of them.
2. Users who viewed the material in many of the services but chose not to ‘post’ any of their own materials or thoughts.
3. Users who posted often to a selection of the services and chose to engage with them in a collaborative manner.

However, the difference between the responses provided by groups 1 and 2 was not significantly different, and so the answers given have been collected into two groups; 'high use and participation in web 2.0 services' and 'low / no use'. One of the reasons why this happened is because the notion of collaboration is difficult to define and a number of interview respondents did participate online in a manner which was not picked up by the survey. See Appendix A for the anonymised results of the interviews.

Even with this very small selection of responses, some useful perspectives that can be gained.
Motives for sharing and collaborating

Overall, the motivations for collaborating and participating seem to be about freedom of expression and the ability to share with a wide range of people:

“The idea of being connected. Initially I very much read other people's ideas, as I started to blog, I was surprised that others were interested in what I had to say.”

“I like to be able to freely express myself and not have to worry about peer pressure, being put down or having my sometimes maverick ideas and opinions be put down by people.”

“I feel that I am able to reach people all over the world. Have conversations with people and share results, information and views with all types of people.”

Ironically this freedom of expression was what made some of the other respondents less sure about online participation:

“My main concern with collaborative schemes in general - as opposed to specific sites where I respect the judgement of contributors - is the prevalence of uninformed opinion masquerading as fact.”

This respondent highlights the notion that individuals are generally more comfortable sharing in smaller groups where individuals can substantiate knowledge through the trust that develops in communities of practice with longevity. The perceived quality of information tends to increase as the groups become smaller.

An interesting inhibitor to online collaboration was the feeling that text was not an effective medium for the communication of ideas and may lead to misinterpretation:

“...my main reservation about using the web to share ideas etc. is that because the written word lacks the unwritten communication that speech affords, so unless one has a good grasp of English it may be easier for your ideas to be misunderstood or misinterpreted. Also, conversation and discussion promotes a spontaneity of ideas that writing them down may dilute or lose.”

“I find it psychologically inhibiting - I am creative and there is something about the fonts and layout and so on which limits my potential.”

These users may be more at ease using Voice over IP (VoIP) technologies or even taking part in Massively Multiplayer Online environments in which text is not the only form of communication or self expression.

Conclusions

Web 2.0 services seem to allow a wide range of engagement, which in some ways reflects social habits in face-to-face communities. Some people use Web 2.0 services to gather information, some to share information and others to solicit feedback and comments. It is clear that these services are becoming an important part of many aspects of users' lives,
cutting across socialising, study and work. The services mentioned in this survey are capable of amongst other things:

- Sustaining social interactions and a sense of community
- Supporting the generation and communication of cultural/social capital
- Being a hub for the discussion and generation of ideas
- Disseminating knowledge
- Sharing materials
- Providing entertainment
- Sustaining and expanding a knowledge network

This survey demonstrates the popularity of certain services and hints at the variety of ways in which they are employed. It is clear that most of these services are used informally, which in many cases is the underlying principle or ideology informing the design of interfaces and functionality. It is not clear if Web 2.0 technology is being used for more formal collaboration in the process of writing academic papers or collaborating around sensitive materials.

The overall theme is that of sharing: materials, ideas, knowledge, friends and contacts. Further research should be undertaken to gain a better insight into the motivations of those using Web 2.0 services. I would argue that educational institutions no longer lead the way in the provision or use of collaborative technologies, and as such, they should look to engage with web-based services that may well have a population not solely made up with students of staff from their own institution. The initial reaction should not be to simply duplicate these services 'in house' without serious consideration to the implications.

Another overarching principle that occurs across these services is the notion of a flow or flux of information and ideas. The majority of current elearning works with static content in tandem with collaborative or discursive spaces such as forums. A challenge for elearning in the near future will be in finding ways in which it can engage in the flow of knowledge that these services provide whilst still working within an identifiable and educationally assessable structure.

Overall, these services, and the manner in which they are used, are staring to reflect the role of a face-to-face educational institution in an online format. Web 2.0 services are capable of bringing together people with similar goals and interests in the same way a physical institution does. In both environments, individuals can be encouraged to study collaborate and socialise. This is an opportunity to provide more fluid online spaces, which could encourage cross cohort communication and can support the cross-institutional peer group that is so important to research. Some of the most challenging outstanding issues in this area relate to administration, ownership, sustainability and assessment, which are cultural (institutional and personal) rather than technical. As such, the focus of further research should be on guiding and facilitating change rather than looking for purely technological solutions.
Appendix A

High use and participation in Web 2.0 services

1. What motivates you to share information / ideas / aspects of your life online?

EDW: The idea of being connected. Initially I very much read other people's ideas, as I started to blog, I was surprised that others were interested in what I had to say. Socially, I've been using discussion boards, email lists etc., for quite some time & am a moderator on some.

RM: Well I like to be able to help people. I like to be able to freely express myself and not have to worry about peer pressure, being put down or having my sometimes maverick ideas and opinions be put down by people.

TGR: I rarely share personal information online, but I am quick to share information and ideas if I feel I have something to contribute to the discussion/forum/community.

2. Do you feel part of a larger community when you use the web to share materials / ideas?

EDW: To an extent. I tend only to think of those that I consider I know "well", but am surprised when I get contacts from a range of people.

RM: I would have to say that I do. I feel that I am able to reach people all over the world. Have conversations with people and share results, information and views with all types of people.

TGR: not unless there is a continued or sustained dialogue spurred by the sharing.

3. Do your peers / colleagues use similar online tools?

EDW: Not much. Some are starting to use them.

RM: Yes. Hardly any of them don't use similar things.

TGR: I believe so

4. What groups of people do you mainly share information with using these tools (friends, family, colleagues, the world)?

EDW: Not family ... "friends" (or, most of the time, acquaintances) for the social things (There are several people who I'd now call friends having initially met them online. Some I've also met in reality, others I have yet to). Colleagues - not so many in my immediate place of work - face to face is better, but colleagues in other places. The Wider world, yes, at times.

RM: I mainly only share information with people that I know. This tends to keep things safe. Although I have had interesting contact with many other people and I am willing to use sites like myspace.com and projectrockstar.com

TGR: all of the above.

5. Does most of your collaboration / sharing take pace between yourself and members of you institution (School, University, Work) or do you collaborate across institutions?

EDW: Different institutions.
RM: I mainly only share my information with people I know within my college that are working on similar projects although I do read published web articles for research and I have emailed people that I don't know for advice.

TGR: Most of the online sharing takes place outside of my own institution, although interestingly, there is a good deal of ‘real-time’ sharing *about* our respective online sharing.

6. What motivated you to start blogging?

EDW: I wanted the students to - so I figured I ought to investigate it myself.

RM: I don't tend to blog too much. A girlfriend said that I should start doing it and I did it a couple of times but I find it mainly pointless.

7. Is your blog personal / professional or both?

RM: It is personal but I don't use it any more.

8. Which groups of people do you think read your blog?

EDW: Students that I teach, other academic / freelance people working in similar areas.

RM: Only friends. However, I do know that some people treat it as a hobby to write and read other people's blogs so I don't entirely know.

9. Do you find the comments people leave on your blog are helpful?

EDW: Yes. Though I don't fret if I don't get any for weeks at a time!

RM: Not usually. I find that sometimes they are abusive and unknown.

Low / No Collaboration

1. What do you find useful about the web?


DL: 1. invaluable information resource 2. useful to check context of word usage if one is translating text 3. without broadband web value diminishes 4. asynchronous discussion groups 5. useful to have own website for marketing & communicating

DB: a) Instant access to information with powerful search facilities
   b) Access to authoritative material
   c) Online shopping - sometimes I feel I single handedly support Amazon!

MB: Googling for info; access to Bodleian and electronic journals via VPN; visual material for embedding in lectures; wide constituency of fellow scientists.

RN: i like the idea of what is possible on it - but in practice I find it time consuming and full of red herrings

AG: If you mean the web in general then I find it useful because there is so much information so quickly to hand. If you mean the web with specific regard to Oxford University, then I suppose I must say the same – info easily accessible, but also that it gives a flavour of what the university is like to people like me who haven’t a hope in hell of ever attending as a ‘proper’ student.

2. What would encourage you to start sharing information / ideas online rather than mainly reading / viewing websites?

KL: Setting up my own business- but I haven't any bright ideas on that at present.
DL: 1. common interest in a topic 2. reciprocal value of site 3. moderated site

DB: I do share information and collaborate but on a selective basis. I contribute heavily to certain sites related to photography and within the philosophy courses I am involved in.

My main concern with collaborative schemes in general - as opposed to specific sites where I respect the judgement of contributors - is the prevalence of uninformed opinion masquerading as fact. Too often good material is swamped by dross and unless one is a regular user of a particular site / forum etc it can be very hard to ascertain the credentials of the person posting.

An example from one photographic equipment forum that I frequent - one person posts about a problem he has had with a particular lens. Soon someone else - who has no experience of the lens - posts that users are having problems. Soon other people -who also have no experience of the lens - are posting that the lens has a dubious reputation and that the majority of users are reporting problems. This type of post is not an isolated incident but happens very frequently.

RN: Quality responses (and I do have two websites ) - I find the level of response is often slow. Also good voice recognition rather than typing (though I am very fast - I get fed up sitting down - I'd like to walk about and be creative)

AG: I suppose taking a course would encourage me to try to share ideas / information on line as it seems to be mandatory with the distance learning.

3. Have you ever been tempted to post comments or upload images etc?

DL: Yes – specialist discussion groups & eBay, not facebook or anything like that

DB: As stated I do contribute to selected forums and I have my own blog and also a website that hosts a large number of photographic images and photography related information.

4. Any other comments?

KL: Overall I prefer to share info/collaborate with people I know well and who I can "look in the eye" and have some proper social interaction with. So I am not keen on chatrooms etc.

DL: Generally without the web life would be much poorer, especially for someone like me who is semi retired. Excellent way of continuing to engage, springboard for other activities, marketing business and saving communication time due to ease of availability of information.

DB: I think online learning and collaborative schemes such as forums are brilliant for distance learning especially in areas such as philosophy that benefit from the exchange of views.

RN: I find it psychologically inhibiting - I am creative and there is something about the fonts and layout and so on which limits my potential..........for example you would get much more useful thoughts here by us being in dialogue, rather than text based

AG: Any other comments – well, my main reservation about using the web to share ideas etc is that because the written word lacks the unwritten communication that speech affords, so unless one has a good grasp of English it may be easier for your ideas to be misunderstood or misinterpreted. Also, conversation and discussion promotes a spontaneity of ideas that writing them down may dilute or lose.