Abstract
This paper addresses sub-theme two of the International Conference on Academic Libraries concerning Technology, Policy and Innovation. It reviews some critical issues concerning the provision of digital information and services in particular as these relate to student expectations and experiences of academic libraries. It considers important research on the concept of the "Google Generation" and points towards some future developments in academic libraries and their staffing to keep them in the forefront of the academic enterprise. Planning for academic libraries to reach out to their users and potential users using modern technologies, will ensure that they remain a vital service in universities.

Key words: Students, researchers, academic libraries, Internet, Information retrieval.

Students' expectations of university
Students coming to university this year in 2009 were for the most part born around 1990. They have expectations and experiences different from senior academic librarians when they were students and library services need to adapt to provide the best possible service for them. Some of these students will already know about each other before they reach the university through their use of Social Networking software such as Facebook. They have accessed the websites of the university before they arrive, and if the university wants to make a good impression it needs to prepare the VLE services and that their website have a prominent position on the website. Many, if not all of these students use mobile phones and increasing these are used not only to communicate with academic staff in their preparation of these VLE programmes the with their friends and families, but also to get information from the Internet. So these students have developed as WISE which provides help to students on an expectation of much of the information they need for various courses. The WISE programmes are linked online 24/7 and being mobile. They may not know the Library website (www.ucl.ac.uk/library/) but also from departmental websites to ensure that students are aware of them. This supports the students in their desire to have online, 24/7, mobile services.

Services for students
Services which support today's students need background planning and consultation. Amongst those which need to be developed is direct online support to student study via a Virtual Learning Environment (VLE) such as Moodle. These services which any registered student can access 24/7 can provide course outlines, digitized readings which support the course work from the reading lists compiled by academic staff, and guides and links to library services which support each course including the names of specific library staff software such as Facebook. They have accessed the websites of the university before they arrive, and if the university wants to make a good impression it needs to prepare the VLE services and that their website have a prominent position on the website. Many, if not all of these students use mobile phones and increasing these are used not only to communicate with academic staff in their preparation of these VLE programmes the with their friends and families, but also to get information from the Internet. So these students have developed as WISE which provides help to students on an expectation of much of the information they need for various courses. The WISE programmes are linked online 24/7 and being mobile. They may not know the Library website (www.ucl.ac.uk/library/) but also from departmental websites to ensure that students are aware of them. This supports the students in their desire to have online, 24/7, mobile services.
Services for research
Research is no longer entirely the preserve of graduate students and academics. Undergraduate students are often asked to do small research projects as part of their course. So who is doing research is changing but so is the way it is done. Almost everyone who does research now tends to begin their work away from the library and online. Also research is very often cross-disciplinary whereas libraries are not. Library websites tend to reflect the organization of the library and its compartmentalised services rather than a service across the academic disciplines. To understand how this works (or does not work) and to plan for the best services we need to understand these changes.

Google Generation Research
Much has been written about the effects of Google services on young people but there has been little systematic reporting of surveys of the actual effects of Google use. This generation are variously known as The Google Generation, The Net Generation, Digital Natives or Millennials. At UCL the CIBER Group in the Department of Information Studies was commissioned by the British Library to look at how the researchers of the future, those students currently at school, are likely to use and interact with digital services in the next decade CIBER (2007). For the purposes of the survey the Google Generation was defined as those born from 1993 onwards, so those who are now preparing to come to University and use academic libraries in the next 2 or 3 years. The broad aims of the study were to ascertain the following:

- whether ways of doing research are changing
- how to plan the future of libraries to support any such changes

This very important survey was carried out via literature review, the consultation of longitudinal studies and deep log analysis of the use of two web-based information services which are used by all ages; The British Library Learn (www.bl.uk/learning/) and Intute (www.intute.ac.uk/). It was underpinned by an OCLC report OCLC (2006), which appeared to support the kind of student expectations which I have outlined above.

Young people’s information behaviour
The CIBER survey found the following about use of the Internet by young people:

- young people have a naive idea about the Internet not understanding that it is made up of a series of different networked resources
- they equate Google their main search engine of choice with the Internet
- they do not often find library services intuitive and prefer to use Google, as it appears familiar, friendly and simple to use
- young scholars use tools that require very little skill to use
- they are not very good at searching for quality information online

However, and this is very important, the study showed that it was not just young people who were exhibiting shallow, horizontal searching behaviour which includes a very short attention span at any one source. CIBER’s deep log studies show that people of all ages from undergraduates to professors exhibit a strong tendency towards what is termed ‘power browsing’. The popularity of abstracts which had previously lost ground shows that even senior researchers prefer a short burst of information, rather than a longer considered view. What must be worrying for library staff is that some of the information used from the Internet is neither credible nor reliable. Libraries have a responsibility to steer users towards the quality resources.

So in a very real sense everyone is part of the Google Generation now, not just young people. Crucially for academic libraries all users display some evidence that they believe that much of what is provided online is on the Internet and freely available whereas in fact libraries may well have spent considerable portions of their budgets to acquire the electronic resources that their users need. The Library Brand is diminishing and needs to be brought back to the forefront if the academic library is to survive. The CIBER report also insists that libraries should pay attention to the rise of e-books and should work to provide them to their users.

Implications for academic libraries
Although this is necessarily only a brief view of the CIBER study nevertheless it is possible to note some important implications for academic libraries. Librarians will have to adopt strategies to work on the following matters:

- Library websites will need to be more visible on the Internet by being made accessible to large search engines such as Google
- Libraries will no longer be the one stop shop they used to be
- Some (expensive) library content will never be used, except as a place from which a searcher online can link to something else
- Staff must ensure that the library is the trusted source for authoritative information
- Staff must ensure that library online services are friendly to those who are familiar with services such as Google and Amazon

In order to make the necessary changes to maintain the continuing relevance of academic libraries it is important for libraries to continue to survey their users. This will help in finding out what their users currently do by way of research and finding out how their library
services can be made more relevant. At the same time library staff must make real efforts to ensure that they are part of the educational process and get information skills training on the agenda. Information skills training should be part of a university education but will also need to be done earlier so that school students make the best use of available information. (Gross and Latham, 2007)

**Academic Library Outreach – the role of library staff**

**i. Current students**

Academic libraries, as has been noted above, need to take time to work on outreach on their services to users and potential users. Not everyone will be willing or able to come to the library. Reaching out to users can take different forms and library staff needs to harness the new technologies to ensure they have the widest reach. Blogs in different subject areas such as those developed by Subject Librarians at UCL are one way of imparting up to date information on specialised services and stock in the university library. The Public Policy and Economics Blog is just one example of this kind of work. (www.ucl.ac.uk/Library/blog/) Subject Librarians at UCL have also experimented in carrying the library out to departments and this year set up around examination time a stand in the Engineering Department Cafe so that students could ask for help from knowledgeable library staff.

**ii. Potential students**

Libraries can also reach out to potential users via their website or in person. It is good to support the university’s agenda by participating in Open Days for new students or for parents of current students, and supporting the Development and Fundraising agenda for the university. Widening Participation which encourages potential students to apply for university can be supported by the library staff encouraging tours of the library for school students. UCL Library Services arranges for school students to use their library during the summer months if they have project work to do. In this way potential students get a taste of what it is like to use a large library and study on their own.

**iii. International students**

Across the world there are now many students who choose to study in countries other than their own. Being an international student can be daunting for such people and the library can provide a safe haven for them as a place where they will feel welcome. Recognizing that there may be a language barrier, UCL Library Services has developed a language support service for international students. Library staff with language skills offer their expertise to act as an email support to international students. Not only does this provide a service to many students but it also shows that library staff at any level in the service can work together to support students. (www.ucl.ac.uk/library/languageskills.shtml).

**iv. Mobile libraries**

The concept of Mobile Libraries, once understood as libraries which travel from place to place is now reinvented as services which can be accessed via students’ mobile phones. Students can for example send a text message for staff help or use their mobile phone to find a tour of their library or check their overdue books. There is now an annual M libraries conference which brings together those librarians interested in developing this kind of service. (http://ocs.sfu.ca/m-libraries/index.php/mlib/mlib2009/schedConf/presentations)

**Conclusions**

This paper has brought together some of the concerns for the future development of academic libraries in the 21st century. Librarians need to reinvent some of their roles and make sure that their services are relevant to their users. Students in particular, but other library users as well, have high expectations of online services and it is up to librarians to make sure that their services are there in the forefront of users’ minds.

Library staff needs to pursue the following matters:

- Regularly survey library users to see how resources are being used
- Devise and run Information Literacy programmes as part of the university curriculum to ensure efficient searching and researching
- Push services into new areas so that online services from the library reach students
- Ensure that the training and roles of librarians suit the new needs of users (Nicholas and Rowlands, Eds., 2008).

A conference like this which brings together an international audience provides a good stepping stone towards working together across national boundaries and making supportive partnerships between libraries in different countries. Librarians are cooperative both by their training and their work and together can work towards the best outcomes for library users.

**References**


6. OCLC (2006), College students’ perceptions of the libraries and information resources: a report to the OCLC membership. Dublin, OH: OCLC.


