E-learning and information literacy

Book section

Chapter Three: E-learning and information literacy

Introduction

We have seen in Chapter Two how the development of e-learning is changing education, in many ways making learning more flexible and more tailored to individual needs. This chapter discusses how e-learning is and will continue to, change the role of librarians and information professionals. E-learning has arisen from the information and communication technological revolution and like other forms of technology, it is undoubtedly facilitating change across the education sector. Libraries have always been an integral part of learning, helping learners find, evaluate and exploit resources. Therefore it is unsurprising that changes in education are being felt in the library profession. With an increasing number of digital resources, librarians have a crucial role in navigating learners through the complex digital information environment. Information professionals in the education sectors in particular, are also becoming important members of an expanding team of learning support staff. Meanwhile within the library profession itself there is a marked interest in the set up and delivery of information literacy programmes, as librarians seek to capitalise on their unique role as educators.

This chapter provides an overview of recent developments and research within the learning support and information literacy field. It provides practical examples of initiatives that librarians can become involved in. The wider concept of ‘e-literacy’ is discussed to identify the skills that both learners and teachers require to fully exploit e-learning. Information literacy initiatives in the UK are somewhat behind the US and Australia in terms of achieving widespread recognition for librarians as educators and raising the profile of information literacy. Therefore, developments from these two countries are particular useful. However, Chapter Two has shown us how in terms of finding integrated library and e-learning solutions, developments in the UK are very much leading the way. By combining the information literacy expertise from the US and Australia with e-learning solutions and the growing recognition of e-literacy in the UK, the chapter identifies is a clear role for librarians in the future.

The New Professionals

There can be no doubt that the library profession has changed enormously in the last five to ten years. While the profession has always been evolving, adapting to new technologies, new media, and the ever-changing needs of users, more recently these changes have accelerated to match rapid developments in information and communication technologies. The Internet has dramatically increased the range of information available and the way in which it is delivered. It is hardly believable that the first web browser technology was only invented ten years ago. Similarly, e-mail, something taken for granted by many today, was unknown outside of Higher Education as little as ten years ago. As a library student in the early 1990s students were taught about developments such as 'Gophers' and used telnet connections to connect to other universities online catalogues. Such technologies seem primitive and outdated today since the rise of the World Wide Web and broadband connectivity. It is difficult to imagine what developments the future will bring, nevertheless the library profession will need to embrace these changes and move with the times to meet the needs of users.

As the technology changes, so the skills that librarians need as professionals must evolve. Information and communication technologies have changed the expectations and demands of library users and the skills and training that the users need has also evolved. In higher education particularly, but also across the sectors, librarians are increasingly seen as being part of a wider group of learning support staff, which includes IT specialists, learning technologists, web editors and other staff. During the 1990s many libraries went through convergence with IT departments, however we are now starting to see the development of truly hybrid teams. This chapter urges librarians to recognise their role as crucial players in this growing profession of learning support staff, working in partnership with learning technologists, instructional designers, IT staff and education staff. Not only does this mean librarians need to work with new groups of people, but they need to be clear about the unique and highly relevant skills that they can offer. Our ability to teach information or e-literacy skills to learners and teachers alike must surely ensure our central role in the education sector. Moreover, traditional skills such as cataloguing and classification are highly transferable into the e-environment, where the creation of high quality

metadata creation is crucial to the success of digital repositories. These more technical considerations are discussed in more detail in Chapter Five.

Information literacy and the 'Access Paradox'

Information literacy has its roots in library user education, where librarians inducted new users about the services offered by the library and taught them something about finding and evaluating information. With the rise of the Internet and web technology there can be no doubting that access to information has improved. Nevertheless, to assume that because information is available on the web, people will have the skills and knowledge to find, access and use it effectively is naive. As Laurillard said:

> It is as absurd to try and solve the problems of education by giving people access to information as it would be to solve the housing problem by giving people access to bricks' (Diana Laurillard, THES, 2002)

Students entering higher education may be assumed to have well developed information literacy skills, however there is considerable evidence to suggest that their use of the Internet is at best 'haphazard.' The JISC funded JUSTEIS project reported in 2000:

> There is no doubting the effect of the Internet on information seeking by staff and students at all institutions; search engines and known sites are the first resort for most academic queries, as well as for many personal domestic queries…Given the wide range of engines used and the haphazard nature of much of the searching, some thought might be given to ways of encouraging students to use the Internet more effectively. (Armstrong et al, 2000)

The increasing amount of information available on the Internet has given rise to what has been called by some librarians as 'the Google generation'. Students are frequently using the popular search engine Google as their first port of call when searching for all types of information on the Internet, rather than using subscription databases and quality information resources. There are countless examples from librarians throughout the world, who are battling to counter this belief that everything can be found through one search engine. Gibbons (2003) recently published a rallying cry to librarians maintaining:

> " …with increasing frequency in a world where information is rapidly becoming both digitised and personalized, the

> relevancy of libraries is being questioned" [Gibbons, 2003 p.1]

Gibbons goes on to argue how "…patrons arrive at the library website with expectations raised through the personalized use of My Yahoo pages..." The wider aim of the paper therefore, argues the case for libraries and their continuing existence and relevance in a digital age. Scare statistics are presented such as "73% of college students [are] using the Internet instead of the library as their primary site for information searches".

Information literacy skills are particularly important now with the increasing wealth of electronic resources available. Borah et al (2004) characterise this as the "Access Paradox" where an increasing amount of information exists in electronic format, but that users are less able to find what they need because they don't have sufficient skills. There is a real challenge in equipping learners with the skills they need to function in the electronic environment. Information Literacy is just one of these skills, but librarians have an important role in helping learners find quality resources in whatever format they exist. In the UK the primary motivation for the establishment of the subject based gateways which collectively make up the Resource Discovery Network (RDN), was to provide a portal for quality internet resources. However, evidence suggests that subject gateways are another of the under-exploited tools created by librarians, with users, preferring the ease and speed of Google. Reporting again from the JUSTEIS project, Thomas (2004) tells how library websites and tools developed by librarians are under-used by students across further and higher education. Librarians need to consider the motivations of their users and make information literacy both timely and relevant to learners.

Definitions of information literacy

It is useful to first define information literacy for the purposes of this chapter. The concept has been defined in numerous ways by authors in the field, but it is generally understood to include the following skills:

- Knowledge of information resources in one's subject
- Ability to construct effective search strategies
- Ability to critically appraise information sources
- Ability to use information sources appropriately, cite and create references

Webber (2002) recognises that definitions of information literacy vary but generally include the following knowledge and skills:

- Effective information seeking;
- Informed choice of information sources;
- Information evaluation and selection;
- Comfort in using a range of media to best advantage;
- Awareness of issues to do with bias and reliability of information; and
- Effectiveness in transmitting information to others.

In the UK the term ‘Information Skills’ is still used in many institutions, however Bruce (1997) writing her thesis on the seven faces of information literacy, argued that information literacy should not be regarded as skills and training, but as seven stages to becoming information literate. She maintained that:

> "Information literacy is about peoples' ability to operate effectively in an information society. This involves critical thinking, an awareness of personal and professional ethics, information evaluation, conceptualising information needs, organising information, interacting with information professionals and making effective use of information in problem-solving, decision-making and research. It is these information based processes which are crucial to the character of learning organisations and which need to be supported by the organisation's technology infrastructure." (Bruce, 1999).

An even broader term that is starting to enter the literature is ‘e-literacy’, which has been defined as the converging of IT literacy and information literacy. It been closely linked to e-learning and has been the subject of an international conference since 2002.[1] The conference describes eLiteracy as:

> “a crucial enabler of individuals and institutions in moving successfully in a world reliant upon electronic tools and facilities.”

Martin (2003) describes how e-literacy encompasses aspects of computer literacy, information literacy, thinking and learning skills, and what he terms media and moral literacy. He argues that:

[1] http://www.elit-conf.org/

> E-literacy is gradually coming to be seen as a challenge which educators, and those who shape education, must address as a priority. At the least, it means avoiding the inequalities wrought by differential access to e-facilities; at the most, it means enabling everybody to make their way with confidence in the e-world.

Information Literacy standards

In many aspects of information literacy education the USA and Australia are both more advanced than the UK, in particular with established information literacy standards. They both also have greater standardisation in the delivery of information literacy programmes and of information literacy being incorporated into the curriculum at all education levels. In the UK, while information skills feature within the National Curriculum for pre-16 education, within the Further and Higher Education sectors a strategic approach to information skills training to students is yet to be established, although a JISC funded project, The Big Blue, went some way towards establishing this.

US and Australian Information Literacy Standards

In 1998 the Association of College and Research Libraries (ACRL) established a Task Force on Information Literacy Competency Standards and charged it to develop competency standards in this area for higher education. In 2000 the group published its Information Literacy Competency Standards for Higher Education.[2] The full text of the standards is available on their website with a number of case studies of how the standards are being used. The ACRL recognise the central role of information literacy for developing lifelong learners. Five broad standards were established, each with performance indicators and specific outcomes. These included:

> 1. The information literate student determines the nature and extent of the information needed.
> 2. The information literate student accesses needed information effectively and efficiently.
> 3. The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.
> 4. The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.

[2] Association of College and Research Libraries. (2000) Information Literacy Competency Standards for Higher Education Chicago: American Library Association. http://www.ala.org/ala/acrl/acrlstandards/standards.pdf

> 5. The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

The standards provide a framework for assessing the information literate individual. The established competencies can be used as indicators of information literacy by academic staff and librarians.

Meanwhile, following the work of the ACRL, the Council of Australian University Librarians published its Information literacy standards in 2001.[3] They reviewed the US standards published the previous year and added two additional standards of their own including: a new standard four which addresses the ability of an individual to control and manipulate information and standard seven that represents information literacy as the intellectual framework, providing the potential for lifelong learning.

UK Information Literacy developments

In the UK, SCONUL (Standing Council on University and National Libraries) acknowledged the need to address the issue of information literacy and information skills training for students with the formation of the SCONUL Information Skills Task Force in December 1998. The SCONUL taskforce in their paper "Information skills in higher education: a SCONUL position paper" went some way toward achieving this and highlighted a number of issues which have formed the basis for further evaluation.

The Task Force has identified two levels of competency to the acquisition of information skills within higher education. The first relates to study skills, or the tools needed to be a learner, which students will require to undertake a course of study. This includes:

- The ability to use a library and its resources
- Ability to search for literature
- Appropriate use of citations and references

[3] Council of Australian University Librarians. (2001) Information literacy standards. Canberra: Council of Australian University Librarians.
http://www.caul.edu.au/caul-doc/InfoLitStandards2001.doc (MS Word document)

SCONUL also developed what are known as the 7 Pillars of Information Literacy, which have been used by a number of UK universities, notably the University of Sheffield and University of Leeds, to develop an information literacy programme.

[reproduce 7 pillars]

Consequently, partly in recognition of the need for further work in this area, JISC funded The Big Blue Project in 2001.[4] The project examined the position of information skills in the post-16 education sector in the UK, from a variety of perspectives, identifying wherever possible examples of good practice. The project made a number of recommendations, including

- JISC in conjunction with bodies such as SCONUL and the Chartered Institute of Library and Information Professionals (CILIP) should form a national forum for information skills to encourage institutions to share experiences and promote the area;
- Assessments should be carried out to examine the baseline skills of students and how these improve over time, following information skills training and the application of these skills to their academic work;
- Further work to investigate the level of information skills amongst academic staff is undertaken;
- That further work into the establishment of standards and performance indicators in information skills should be carried out, drawing in particular on the US and Australian work in this area.

Moreover, the project recognised that one of the biggest problems in UK further and higher education institutions is getting those outside of the library to realise the importance of information literacy and to ensure it is integrated into the curriculum. There are also problems getting any formal assessment tied to information literacy programmes, which means that students are less likely to take the courses seriously.

SCONUL are an important lobbying group for librarians and in 2003 they published a Briefing Paper entitled ‘Information Support for eLearning: principals and practices’

[4] http://www.leeds.ac.uk/bigblue/index.htm

(SCONUL, 2003). The paper's intended audience was primarily partners in the UK e-University initiative, which was set up in 2001 to deliver online courses throughout the world.[5] However, the paper recognised that the principles and delivery mechanisms 'are relevant to anyone with an interest in efficient eLearning' (SCONUL, 2003, p.2) SCONUL recognises the important role for librarians in developing efficient e-learning and those considering e-learning ventures are urged to talk to library and information professionals about course support. Information literacy is a central principle of the briefing paper, which states:

> All eLearners must be given the opportunity to develop and enhance their skills in finding and using information. This not only ensures that they can fully exploit information resources for their eLearning course, but also provides them with a life skill. (SCONUL, 2003. p.5)

The paper discusses the importance of integration between the delivery of course materials and information support. It also provides a good example of how librarians need to promote their skills to the wider education community. This is discussed in more detail later in this chapter. However, promoting information literacy to academic staff still remains a challenge that many librarians must face.

E-literacy and E-learning

Many librarians will be familiar with the term 'information literacy' but e-literacy is a relatively new term emanating from the Universities of Glasgow, Glasgow Caledonian and Strathclyde in Scotland. Martin (2003) argues that:

> The notion of e-literacy is based on the assumption that there are skills, awarenesses and understandings which will enable individuals firstly to survive and secondly to be more effective, in their e-encounters.

He goes on to define e-literacy as being comprises of computer, information, media, moral and media literacies. The conference attracts IT support providers, librarians, educationists, educators, researchers and policymakers. In many ways these e-literacy skills are more relevant to librarians involved in e-learning initiatives than simply considering information literacy in isolation. However, the field is less well

[5] Backed by the UK Government with £55m funding, The UK e-Universities (UkeU) were established to deliver online and worldwide the best degrees and degree-level learning that UK universities can provide. More information available at : http://www.ukeu.com/

established, the terminology less well defined , so introducing the concept to academic staff is not without problems. However, one of the advantages the term 'e-literacy' has over information literacy, is the use of the 'e' word. Just as e-learning as a concept has very quickly fallen into mainstream use, so perhaps e-literacy will give librarians the edge when selling their skills?

E-Literacy / Information Literacy for Academic Staff

Much of the work on information literacy has concentrated on skills and education for students or learner, however, a crucial area must be the information literacy levels of staff who are responsible for the development and implementation of e-learning. Following on from the Big Blue Project, JISC funded the six month Big Blue Connect Project in 2003.[6] This project carried out a survey of academic, managerial, administrative and technical staff, to establish how staff access and use information within their work environment. The research found there was a general lack of staff awareness about information skills and a lack of training for staff, in particular non-teaching staff. Where training existed it focused primarily on the development of ICT skills and where staff had received training in the development of information skills, this was mainly in the form of a one-off training session to support the introduction of a new service or resource.

Developing information literacy skills, or e-literacy skills, is essential for academic and other support staff to be able to fully engage and exploit library resources in the e-learning system. Engaging with academic staff to develop their own skills also makes them more likely to see the value of building these skills into their courses for students. Building on information literacy programmes offered to students, library staff will need to play an important role in delivering this type of e-literacy education to staff. E-literacy skills for staff might include knowledge of the range of resources available in the digital library, such as which journal titles are available in electronic format. But it would also include teaching a member of staff to build an online reading list and add stable links to electronic journal articles. E-literacy also involves knowledge about copyright, and licensing arrangements for electronic resources, what Martin (2003) terms, moral issues. So staff would receive guidance and support about issues such as which resources are licensed to allow downloading for use in the virtual

[6] http://www.mmu.ac.uk/services/library/bbconnect/

learning environment, and which must be linked to. Copyright and licensing is discussed in greater detail in Chapter Four. Nevertheless, library staff will increasingly be called upon to offer guidance in this area, through a variety of means such as:

- One to one training and support for guidance on specific issues
- Group training sessions for more routine problems such as setting up an online reading list, or learning to use the digital library
- Documentation (printed and web based) that staff can consult on a need to know basis

It is important that e-literacy programmes are not exclusively designed for academic staff or those at the front line in the delivery of e-learning. Library staff should recognise that there is often a team of people who are involved in any e-learning project. Administrative staff, such as departmental or faculty managers and secretaries are often responsible for updating the information within the virtual learning environment. Tasks such as setting up online reading lists may also be routinely undertaken by administrative staff. It is important that the training is offered as widely as possible and is available to other learning support staff.

Librarians as teachers

In the past of the graduates entering into the library and information profession, few would say immediately that they were drawn to librarianship to teach. Yet teaching is something that many librarians routinely undertake, through a variety of means. As computers became widespread throughout organisations, increasingly librarians have needed to teach using computers. This started out as teaching users skills such as searching the online library catalogue, however, it very soon extended to teaching end users to search online databases, formulate Internet search strategies and use a variety of subject specific databases and electronic resources. As we have seen earlier in this chapter the widespread development of information literacy programmes, means that teaching is something many librarians now undertake routinely.

The curriculum of library schools has undoubtedly changed dramatically in the last ten years due to the developments in ICTs. However, it is not clear if newly qualified librarians are graduating with the full set of skills that they require to teach.

Information literacy theories and principles are well and good, but librarians increasingly need practical skills to be able to teach. Similarly, topics such as learning theories, pedagogy and e-learning are yet to be incorporated into many library school curriculum. It is noteworthy that one topic that has been added to many curricula at library schools is research methods. It has been increasingly recognised that a significant amount of library and information work is project based and there is an obvious need to ensure the profession is equipped with the appropriate research skills. Over the last ten years there has been an enormous amount of public money made available for library research, from bodies such as JISC in the UK and the NSF in the US. In the UK in particular, money has been made available to public libraries under initiatives such as the New Opportunities Fund (NOF) and to academic libraries as part of the Research Support Libraries Programme (RSLP).

However, the role of librarians as educators, teaching information literacy skills, either face to face or via the web, or a virtual learning environment has witnessed an enormous growth in the last ten years. It is imperative that library schools provide their graduates with the appropriate skills to carry out this type of work. In part this seems to reflect the tradition in many UK universities to focus on research in preference to teaching. Therefore the ability of a library to attract research funding for a project is more highly valued that the ability of a library to provide appropriate and timely information literacy education.

Another important issue is the need to embed information literacy skills into the curriculum as early as possible. The lack of professional librarians in many primary and secondary schools is a key problem. One way of tackling this is for teachers to recognise the important role of the librarians. For this reason, Price and Secker (2004) argue that information literacy needs to be an important part of the education of trainee teachers, and that teachers must be encouraged to work with librarians. While we are not advocating that teachers become librarians or visa versa, partnerships between these professions must be strengthened. Currently it seems that learning how to teach is a skill many librarians learn on the job or through their continuing professional development. The next section considers how those within the profession can obtain the skills they require.

The need for continuing professional development

Continuing professional development has always been important in the library profession, with numerous training courses and conferences in which practitioners and researchers can share experience and learn new skills. In the UK, US and Australia the professional bodies supporting librarians and information professionals all play an important role in continuing professional development. In the UK, a group of librarians have recently set up an Information Literacy sub-group of the Chartered Institute of Library and Information Professionals (CILIP), with a cross-sector remit. Similarly the American Libraries Association (ALA) has a AASL/ACRL Interdivisional Committee on Information Literacy. Groups such as these allow librarians working on information literacy to build networks of support and enable them to share experiences.

Professional bodies increasingly offering training events and conferences that ensure that staff are able to develop their knowledge and learn new skills as their job evolves. Information literacy has been the theme of several recent meetings and conferences of groups such as the Association of College and Research Libraries in the US. However, more informal networks, facilitated by technology are also important. Email lists are an extremely useful way of keeping up to date, for example the JISCmail Information Literacy mailing list, which was established in 1998 and has over 800 members.[7] More recently, one of the best ways of keeping up to date is through the Information Literacy Weblog, established by lecturers at the University of Sheffield (Webber, Johnston and Boon, 2004) in April 2003. Notices of events, conferences and publications of relevance to the field are regularly posted on the site. Rather than an e-mail list that sends messages to all the group, a Weblog (or Blog) is rather like an online noticeboard, although it has other features, allowing members to post comments and receive notifications of new messages. These less formal means of networking are at least as important as more formal education opportunities discussed subsequently.

Education Opportunities for librarians

In 1999 JISC funded an eLib Project, EduLib, specifically to enhance educational expertise and teaching skills in the higher education library and information services

[7] To view the archives of this list: http://www.jiscmail.ac.uk/lists/LIS-INFOLITERACY.html

community. The project ran a series of workshops which were attended by over 250 participants. However, it still remains difficult for librarians in post-16 colleges to gain recognition for their role as teaching staff and for academic staff to see them as equal partners. Some have attributed this attitude to the emphasis in librarianship on 'training' rather than teaching that tends to dominate information literacy education. Many information literacy programmes also tend to focus on specific tools and databases, rather than teaching principles and the underlying theories. One way to shift this emphasis is to ensure librarians are involved in the development of all new courses from the outset. Where possible information literacy should be embedded into the curriculum, and delivered jointly by faculty members and library staff.

Netskills is one avenue open to UK librarians offering wider training opportunities.[8] It was established by JISC in 1995 to provide quality Internet training for UK Higher Education. Their remit has since been extended to offer training to further education but also to the commercial and non-commerical sector. Broadly their services fall into three categories, including: delivering workshops at regional centres throughout the UK or on-site, developing training materials for use by other trainers available under licence and the provision of on line, self-paced tutorials. Courses cover a range of topics, but they are frequently attended by librarians and other learning support staff. Recently Netskills have been offering several different courses covering topics related to e-learning.

Librarians might also consider gaining formal qualifications in the education or learning technology field. Numerous accredited courses are available, with an increasing number of postgraduate qualifications in learning technology and e-learning. Oliver et al (2004, p.49) provides a useful indication of the range of e-learning courses available for learning technologists in UK Higher Education. If academic librarians are specifically interested in gaining recognition for their skills as a teacher then accreditation by the Institute of Learning and Teaching for Higher Education (ILTHE) is the most obvious route. The scheme is primarily aimed at academic staff, but increasing numbers of librarians have been accredited in this way. This route is discussed in more detail below.

[8] Netskills http://www.netskills.ac.uk/

Extending your Network

Networking between librarians has always been well established, with high levels of participation. However, arguably librarians now need to consider extending their network beyond the library profession and getting involved in other external groups. A danger is that if librarians continue to network and talk only with others in the profession they will become marginalized instead of playing a central role in the learning support field. A number of relevant organizations and bodies are listed below, with details of their websites. In order to be taken seriously as learning support professionals, librarians need to build connections with other groups of professionals and ensure they have representation in other groups. Many of these groups are UK-based, however librarians outside the UK are urged to seek similar bodies in their own countries.

The Higher Education Academy (Incorporating the Institute of Learning and Teaching)
http://www.heacademy.ac.uk/

In UK the Institute for Learning and Teaching for Higher Education (ILTHE), mentioned above, was formed to recognise expertise in teaching and learning. Specifically it aimed to:

- Improve teaching and learning and the quality of the student experience in higher education;
- Provide a focus for professional development in teaching and learning of staff in HE;
- Raise the status of, and enhance the respect for, teaching and the support of learning in higher education.

Membership of the ILTHE was open to librarians who could be formally accredited through undertaking the programme. There was also an active ILT Librarians Forum which met to discuss a number of issues, with information literacy very much at its heart. By achieving ILT accreditation, some in the library profession felt that librarians would be taken more seriously as teachers.

In May 2004 the ILTHE announced it would become part of the Higher Education Academy[9]. The Academy will be formerly launched in Autumn 2004 and its remit will be wider than the ILTHE as it will also incorporate the Learning and Teaching

[9] http://www.heacademy.ac.uk/

Support Networks (LTSN). The Higher Education Academy will have a number of roles including; advising on policies and practices that impact on the student experience, supporting curriculum and pedagogic development and facilitating development and increasing the professional standing of all staff in higher education. All current members of the ILTHE will transfer into the new HE Academy during the summer of 2004 as a list of accredited practitioners and will be the first professionals in the country to be recognised as such. It will be important for librarians to have a role in the Academy and that the Librarians Forum continues.

The Learning and Teaching Support Network (LTSN) were funded by the four HE funding bodies in England, Scotland, Wales and Northern Ireland, however they have now been incorporated in the Academy. They were set up to promote high quality learning and teaching in Higher Education through the development and transfer of good practices in all disciplines. The network consisted of twenty-four subject centres based in higher education institutions throughout the UK and a single Generic Centre. The LTSN aimed to shape the thinking of policy makers and provide HE communities with a stronger voice in national debates and discussions. Subject Librarians were often involved in their respective subject center. Support for the library profession was also provided through the LTSN for Information and Computer Sciences. Furthermore, in 2002 several subject centers collaborated to host a Librarian's Day which examined a range of issues related to teaching and learning. The valuable contribution of librarians needs to be maintained as this organization becomes part of a wider group.

The Association of Learning Technology (ALT) http://www.alt.ac.uk/

ALT is a UK based professional and scholarly association, which brings together those with an interest in the use of learning technology. ALT aims specifically to:

- Promote good practice in the use of learning technologies in education and industry;
- Represent the members in areas of policy;
- Facilitate collaboration between practitioners, researchers, and policy makers.[10]

[10] More information available at: http://www.alt.ac.uk/

The Association was formed in 1994 and is celebrating it's ten year anniversary in 2004. It publishes a newsletter and a quarterly peer-reviewed journal. It also organizes the main academic conference for UK learning technologists. A number of librarians have attended this conference, and in 2003, following the launch of the DiVLE programme, some integration between the communities took place. The Association is currently working towards establishing an accreditation framework.

Oliver (2004) provides an overview of professional bodies for learning technologists from around the world and finds that in Australia and New Zealand there is no corresponding body. In the United States he cites similarities between the role of instructional technologists and learning technologists. Meanwhile in Europe several organizations are identified including:

- European Institute for E-learning (EIfEL);
- European Distance Education Network (EDEN);
- European Federation for Open and Distance Learning (EFODL);
- European Association for Distance Learning (EADL).

UCISA (Universities and Colleges Information Systems Association)
http://www.ucisa.ac.uk/

UCISA is not an organization that librarians have traditionally been associated with, as its focus is very much information systems. However, UCISA has a number of sub-groups, including the Teaching, Learning and Information Group (TLIG). This group organizes conferences and training events which may include areas of mutual interest with librarians.[11] Moreover, UCISA has increasingly been working more closely with SCONUL and in January 2004 organized a joint event. Entitled "E-learning: the evolving role of academic services" the event was organized in recognition of the mutual interest in the subject.[12] It also highlighted the increasing overlap between the roles of library and learning technology staff. The event sought to bring together the two communities to hear from those working with these issues, and to provide a forum to share and debate them amongst delegates. It is anticipated that similar events will be held in the future and librarians should be encouraged to attend.

[11] A up to date list of courses, workshop and conferences is available at: http://www.ucisa.ac.uk/groups/tlig/courses.htm
[12] http://www.ucisa.ac.uk/groups/tlig/teach/elearning04.htm

Practical approaches

This concludes with a summary of a number of practical ways that librarians can become involved in e-learning through information literacy programmes and the development of online tutorials. Further information, in the form of detailed case studies, to support this chapter is presented in Chapter Six.

Developing online tutorials

One of the most common initiatives being developed by librarians are self-paced online tutorials available from the library website. These are designed to allow students to learn topics as and when they require the knowledge at a time and place convenient to them. However a major criticism of these packages is they can be badly designed and structured with little interactive features that engage the learner. It is often difficult to obtain feedback

In order to develop these packages, there are a range of skills the librarian must learn, or they must acquire from an educational technologist or web designer. If you are planning on developing an online tutorial it is essential that you consider the following:

- Do you have knowledge of web-authoring and web design or do you have access to someone with these skills?
- Do you have knowledge of pedagogy and how to teach online, or access to someone who does?
- How will you engage the learner and develop interactivity into the package?
- Will there be some form of assessment in the package? Or how will the learner be able to check their progress?
- How will you monitor usage of the package and evaluate it's benefits?

Advantages of web-based tutorials

Materials made available from the library website can be used by any library user. They are particularly valuable for generic sessions, such as a virtual tour of the library, where library visitors as well as members of the institution may wish to use the tutorial. You may consider making the package available on the web but password protecting it, or making it available via an Intranet so that only authorised users, in the case of a university, this would be registered students and staff, can access it.

Disadvantages of web-based tutorials

Web-based tutorials are not without problems, in particular:

- They need a lot of work to develop, and to update, particularly if produced using flat HTML pages. Consider using a VLE or a content management system for ease of updating;
- They often require detailed knowledge of web design, educational technology;
- It can difficult to make them interactive.

Using the virtual learning environment

An alternative to making information literacy materials available on the web is to use the virtual learning environment software. Materials can be embedded into existing subject based courses or a separate information literacy module can be made available to students. The advantages of using the virtual learning environment is that the course will be easier to set up and not require specialist web design skills. The virtual learning environment also has a number of inherent tools that can be utilised to make the course interactive. The availability and usability of these tools will vary depending on the VLE software being used, but generally will include online assessment tools, communication tools, such as bulletin boards or online chat rooms, the facility to subject online assignments and tracking facilities. For more information see the case study from Imperial College London, detailing the creation of an information literacy course in the VLE in Chapter Six.

Information literacy continues to be taught in many institutions through face to face classes alongside some form of web-based instruction. This style of teaching is known as blended learning. It can be highly effective offering students valuable support via the web to back up their face to face classes. However, it can easily be badly structured and integrated and lead to confusion and students having an unclear understanding of the role of both aspects of the teaching style.

Using the VLE for staff development

Another area of significant interest to librarians currently is using the VLE for staff development. Staff development in academic libraries is often well developed and includes programmes of training that often run throughout the year. As new electronic resources or system become available, or procedures and processes evolve, so the

need for staff development in most libraries is constant. Early on, a number of libraries realised the valuable role the VLE can play as a vehicle for staff development. Similar to it's value for off campus students, the VLE allows staff to access staff development resources at a time and place convenient to them. In many institutions using the VLE for staff development also provides a useful way of ensuring library staff are familiar with the software that students are using.

Conclusion

This chapter has discussed how e-learning is changing the role of information professionals and offering them new opportunities to capitalise on their expertise. Through the delivery of information literacy programmes, which are both timely and integrated, partnerships with teaching and learning support staff can be strengthened. Librarians need to work with new groups of professionals, they need to develop new skills, in particular teaching skills, which enable them to deliver these programmes where appropriate, using technology. E-learning is offering exciting and new possibilities which the library profession need to reach out and seize. The key to success is to get out of the library, build partnerships with teachers and learning technologists and infiltrate their networks. Chapter One showed how the library is no longer simply a physical building, it is a vast collection of digital resources, many accessible from the desktop, anywhere at any time. Librarians need to ensure their place in the virtual world of learning is as central as it was in the physical world.

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