Libraries and the Internet; a multi-national training course

Lyn Robinson[1], Rima Kupryte[2], Peter Burnett[3] and David Bawden[4]

[1] School of Library, Information and Archive Studies, University College London
[2] Network Library Program, Open Society Institute, Budapest
[3] Bodleian Library, University of Oxford
[4] Department of Information Science, City University London

Summary

This paper describes a training course on library applications of the Internet, conducted in Budapest for the Network Library Program of the Open Society Institute. This is a 10 day course, with 50 hours scheduled teaching, including lectures, tutorials, practical work, student presentations and guided reading. The course has been run in 1997, 1998, and 1999, with a total of 87 participants from 25 countries in Central and Eastern Europe and Central Asia, plus Haiti.

The course has five main themes: Internet and the librarian; identifying resources; quality of resources; publishing on the Internet; training the trainer. The main purpose of the course is to equip participants with the knowledge and skills necessary for them to act as teachers and trainers of Internet in a library setting in their own institutions and countries.

The course has changed considerably over three years, reflecting changes in technology, in the extent of Internet applications for libraries, and in the knowledge and expertise of participants, and these changes are described and discussed.

Introduction
This course, run for two weeks in July, forms a part of the Summer University (SUN) programme of the Central European University (CEU) in Budapest. SUN comprises a series of two-, three- or four-week courses, covering topics in the humanities and social sciences, and aiming to bring together students from Central and Eastern Europe and Central Asia, with tutors from the region and from the rest of the world. 'Libraries and the Internet' is the only SUN course aimed at a specific professional group.

The course is sponsored by the Network Library Program (NLP) of the Open Society Institute (OSI) in Budapest. OSI-Budapest, together with its sister organisation OSI-New York, stands at the centre of an informal network of more than 30 national foundations and other organisations, created and funded by the Hungarian-American philanthropist George Soros. The aim of all parts of the OSI network is to promote the concept of Open Society, as first enunciated by the philosopher Karl Popper (1962), and based on the recognition that people act on imperfect knowledge, and that nobody is in possession of the ultimate truth. In essence this refers to societies based on democratic principles and the rule of law, with freedom of speech, open discussion and criticism of policy in a vigorous and diverse civil society, respect for minority rights and opinions, and rights to education and access to information. The network is active in the former socialist countries of Central and Eastern Europe, and the former Soviet Union, as well as in Haiti, Guatemala, the USA and Southern Africa.

NLP, founded in 1994 and originally known as the Regional Library Program, supports developments of libraries throughout these areas, through a variety of activities, including a programme of grants for activities such as implementation of library automation, preservation and access, collection development, support for access to electronic journals, grants for individual fellowships and conference attendance, and a variety of 'in country' training activities. The CEU SUN course described here is NLP's only regular training activity bringing together participants from across the region.

Purpose of the course
The emphasis of the course is very much on 'training the trainer', helping participants to develop skills of effective communication. The main purpose of the course is to equip the participants with the knowledge and skills that they will need to understand and make effective use of the Internet themselves, and also to teach and train colleagues and library users in their own institutions. The material covered, and the means of teaching, are therefore geared to helping students, not only to gain personal knowledge and skills in using the Internet effectively, but also to appreciate alternative ways of teaching and training, and of effective communication of information. Resources and encouragement for continuing learning after the course is over are also an important feature, as is the promotion of networking among the student group, for future mutual support and assistance.

Participants

The course has been designed to accommodate 30 participants on each occasion, though last minute circumstances prevented some participants from attending, so that a total of 87 have attended the course in three years. All participants come from the countries supported by OSI Foundations, essentially the former socialist countries of Central and Eastern Europe and Central Asia, though certain African and Central American countries are also supported, and one participant has come from Haiti.

The countries of the participants over the three years have been:

Country	
Albania	2
Armenia	4
Azerbaijan	3
Belarus	3
Bulgaria	8
Croatia	2
Czech Republic	3
Estonia	3
Georgia	1
Haiti	1
Hungary	4
Khazakstan	3
Kyrgistan	2
Latvia	4
Lithuania	6
Macedonia	1
Moldova	2
Mongolia	2
Poland	4
Romania	5
Russia	8
Slovenia	3
Tajikistan	3
Ukraine	4
Uzbekistan	1
Yugoslavia	5

The participants' work roles have been:

Role	
Librarian, academic library	40
Librarian, special (including government) library	18
Librarian, national library	14
Librarian, public library	10
Teacher / trainer	5

The very varied backgrounds of the participants is the most notable aspect of the groups. In particular, their computing expertise ranged from those who had little experience in using the most basic facilities of a PC, to those with extensive expertise as systems specialists or computer trainers. This posed a stimulating challenge to the course tutors.

Some participants already act as teachers and trainers in their own institutions, though few have any formal training for this role; many have no experience in this aspect.

Some change in the background knowledge of participants has occurred over three years, mainly due to the widespread adoption of the Internet throughout the region. Initially, apart from a few specialists, the participants had little knowledge of the Internet, and many had no experience in its use; by 1999, all participants were familiar with the idea of the Internet, and most used it, albeit perhaps for limited tasks such as e-mail, on a regular basis. At the outset, virtually none of the participants had personal web pages, few of their institutions had an Internet presence, and not all had access to electronic mail. By 1999, most of the institutions represented had some form of Internet site, and several of the participants had constructed their own web page; e-mail, telnet and FTP were commonly used, and many were familiar with web mail systems, such as Hotmail. Most, though not all, participants were familiar with the web and the use of browser software, though knowledge of search engines was rather limited, and familiarity with web page creation and HTML even more so.

The course has had to change, in syllabus and form of presentation, to meet these developments. Similarly it has had to adapt to changes in technology, for example the virtual disappearance of the once common gopher server.

Syllabus and teaching methods
The course is conducted at the Kerepesi campus of the Central European University, Budapest, in a modern building with good lecture room and computing facilities. All participants have their own PC, with the latest versions of relevant software packages - Internet Explorer, FrontPage, PowerPoint and Word - and fast network connection. The course is primarily conducted by two tutors, with additional input from the Course Director, and local guest speakers where feasible.

The course lasts for two weeks, with 50 timetabled contact hours over 10 working days. In addition, most students spend many hours in unsupervised reading, practical work and preparation for presentation. The course also includes visits to local libraries and information centres, public lectures from other SUN courses, and a social programme. The course is conducted in English, with no translation facilities; though students are selected with English language capabilities as a main criterion, following two weeks of technical material in a foreign language is still a test of their resolve.

A mix of teaching methods has been employed on the course since its inception. The mix is designed to ensure that, as well as helping students to gain Internet knowledge and skills, they are encouraged to focus on the teaching and training process, and to consider the styles of teaching and learning which they find most effective. An aim is also to lay a foundation for students to continue their own studies after the course is over. Teaching methods include:

- **lectures**: generally two 45-60 minute lectures on each of the main topics. Lectures are illustrated by PowerPoint presentations, and demonstrations where appropriate, and supported by paper notes and resource and reading lists.
- **tutorials**: optional small group sessions, arranged on an *ad hoc* basis according to student need. They cover three kinds of topic: *basics* - e.g. use of browse software; *technical* - e.g. use of PowerPoint to create effective presentations; *non-technical* - e.g. how to plan training sessions
- **practical exercises**: students are invited to carry out specific exercises, e.g. finding answers to reference queries, general exercises, e.g. identifying useful resources for specific groups of their own users, and individual investigation and assessment of resources, starting from the resource lists provided.
- **student presentations**: all students give a 10-15 minute presentation to the whole group, on a topic related to the subject of the course, and thereby gain practice in public speaking and in planning a short training session. The purpose is to encourage them to

reflect on the best style of teaching, and to gain experience in selecting the most appropriate form of technical support - PowerPoint, web pages, flip-chart etc.

- *guided reading* - resource lists of books, articles, and web pages are provided to accompany all sessions, each student is provided with a set of books to the value of $150, covering the main topics of the course. Students are encouraged to carry out their own reading during the course, from the books provided, from Internet resources, and from materials available locally, primarily in the CEU library, and to discuss the material with tutors, and use it in practical exercises and presentations. One difficulty in this respect is the extent to which Internet-related books become outdated rapidly; we have tried to deal with this difficulty by choosing a mix of relatively 'classic' texts dealing with principles (in as much as such exist for the Internet) with current editions of books dealing with the software used for teaching, and augmenting these with Web resources.

Given the intensive nature of the course, and the difficulties for students in dealing with material in the English language, much follow-up study is carried out after the students return home. This is presented to the students as an example of the continuing learning which is necessary for all professional workers, and for which the Internet can be a powerful aid. Support for this primarily comes from resources with which the students are provided, and by follow-up support, largely through the medium of electronic mail, offered by the tutors. The resource material provided to students is intended both to assist their own learning, and, where appropriate, to be used as a template in the development of their own teaching materials for local use. Although virtually all material provided on the course, including resource listings, is in the English language, students are encouraged to supplement it with material in languages relevant to their local situation; assistance in identifying such material is given during the course.

Although all of these means of teaching have been used on the three occasions that the course has run, there has been some change in emphasis. More use is now made of tutorials, in order to meet the individual needs of participants, as opposed to whole-class lectures and practical sessions; this reflects the increasing level of Internet expertise present initially in the group, which creates a requirement both for entry-level instruction for the minority without experience in basic Internet usage, and for more specialist instruction in the use of the greater variety of software packages now available.

The student presentations have also changed in emphasis. Initially these were closely linked with the exercise in construction of a web page, being essentially an explanation of the page; latterly, these have been treated as quite separate exercise. Students are encouraged to consider and use the most appropriate technology as an aid; this may be a web-page created for this occasion, an existing web site (probably that of their organisation), a PowerPoint presentation, use of flip-chart, or no visual aids at all. One aim is to discourage the belief that the best presentation is that which uses the most 'flashy' technology.

There have been five main strands, or themes, within the course, since its inception, and have received roughly equal attention throughout the three years, though the details of their content, and indeed their names, have changed. They are:

- Internet and the librarian
- Identifying resources
- Quality of resources
- Publishing on the Internet
- Training the trainer

They will now be considered in turn.

- **Internet and the librarian**

This theme acts as an introduction and conclusion to the course, and the first and last lectures are devoted to it. When the course was first run, it was used to introduce the concept of the Internet, which was unfamiliar to many participants, and to show its present and, more particularly, future relevance to librarians. By the third running, the need to describe the Internet *per se* was much less, though attention still needed to be given to explaining terminology, and explicating some concepts which cause confusion. This was combined, to form the introduction to the course, with a discussion of the current impact of the Internet on library operations and services. This includes a fairly broad description of the changing nature of libraries, particularly the concept of the digital, virtual or hybrid library (Bawden and Rowlands 1999), in which Internet services play a major role. This, in turn, leads on to a description of future roles for librarians, and the continuing relevance of 'traditional' skills, such as metadata description, indexing, classification and the identification of information needs.

This theme is returned to throughout the course, and provides a conclusion in the form of a lecture on the topic of the librarian in the information age (or digital age). This returns to the introductory material, in the light of the what has been covered in the meantime, trying to impart a positive attitude as a counter to the 'end of libraries' viewpoints, still being promulgated by some commentators. With a view to expanding the participants' horizons as to the applicability of the Internet, the role of the librarian in such areas as the promotion of knowledge management (Bawden 1998, Streatfield and Wilson 1999) and in overcoming information overload (Bawden, Holtham and Courtney 1999) are also discussed.

While the emphasis in the initial course had necessarily to be in showing a group of participants, many of whom were largely unaware of the range of relevant and useful Internet resources available even at that time, the value of the Internet for library work, the reverse is, to some extent, true today. It is necessary to continually present a realistic perspective, so that participants do not feel they are being told that the Internet is, or is likely to become, a panacea, answering all questions and providing all information. We find Crawford's concept of the 'complex library' (Crawford 1999), providing a complementary mix of digital and physical resources, to be useful in this respect.

- **Identifying resources**

Finding relevant resources has been a consistent theme for the three years of the course. It has generally been organised into three sections: principles of information retrieval; strategies for reference and research; resources of particular value for library services. Each section has been covered by lecture and practical exercise, with resource lists, with tutorials as appropriate. The major change over the three years has been the increasing importance of subject gateways, e.g. Pick for library/information resources, EEVL for engineering, and SOSIG for the social sciences [see www.hw.ac.uk/libwww/pinakes or www.bodley.ox.ac.uk/olig for listings of subject gateways], as an alternative to search engines and general directories, as tools for finding useful resources. Whereas concentration at an early stage had to be on how to identify and use search engines, the current issue is how to decide among the variety available; older search tools, such as Veronica, Archie and WAIS, still of importance in 1997, are now of historical interest only, and are presented as such.

The presentation of the use of the Internet for reference and research has changed considerably since the 1997 course (taking these terms to refer to the answering of closed and open questions respectively). At that time, the number of useful and up-to-date reference sources was so small that it was feasible to list them all, if not to discuss them individually. While not all research sources could be listed, it was feasible to provide a sample of useful sources in all subject areas. By 1999, the amount of reference material had increased to the extent that only sites of the 'Internet reference shelf' sort could be listed, with example of a few specific reference sources discussed. Research sources had increased to the extent that the only feasible approach, for a group of participants with very wide subject interests, was to discuss general strategies (in terms of the traditional

library/information categorisation of primary, secondary, tertiary and quaternary sources) and rely on a listing on subject gateways (themselves too numerous for completeness of listing) for illustration. Participants identified sites on subject areas of interest to themselves as part of their individual work.

- **Quality of resources**

This theme has remained relatively unchanged since the first course. It deals with the difficulties of identifying resources of high quality, and appropriate to the needs of users, from among the great diversity which may be found on the Internet. It is taught by lectures and practical exercises, which aim to explain the criteria which may be used to assess resource quality, and the ways in which these may be adapted to particular situations and user needs. The resources available to support teaching of this topic have expanded in scope greatly in the last year; Internet resources include tutorials and criteria lists for subject gateways (see, for example, www.sosig.ac.uk/desire/qindex.html), while conventional resources include books devoted to the topic [see, for instances Alexander and Tate (1999) and Cooke (1999)].

In the 1999 course, this theme was expanded to incorporate the concepts of information literacy and digital literacy (Bawden 1999, Gilster 1997). These take the idea of evaluating information quality into a broader perspective, from the identification of an information need, though the selection of resources, finding and accessing information, and evaluation of information retrieved, to the organisation of information, knowledge assembly, and critical thinking necessary for effective use of information. It seems to us that these 'softer' skills will be an essential complement to the specific skills of Internet use in the future.

- **Publishing on the Internet**

The purpose of this theme is to ensure that participants are aware of the principle and practicalities of making their own library information available on the Internet. In the first course, when few of the participants had any expertise in this area, the focus was on understanding the HTML language, constructing a web page by use of HTML coding with a simple text editor, and some very basic concepts of page design. By 1999, with much greater experience in the library world generally, and among the course participants, in the matters, a more 'advance' approach could be taken; this involves an introduction to HTML (and some discussion of discussion of its possible successors such as XML), followed by a comparison of means for constructing HTML pages: direct input of codes; use of Microsoft Word as an HTML editor; and use of the function-specific FrontPage software package. Design aspects are also emphasised, with a view of helping participants consider the techniques which can make web sites simple to navigate, and the information contained easy to extract; examples of good site design are mentioned throughout the course, and reinforced for this theme by reference to Internet resources which illustrate and explain this aspect.

- **Training the trainer**

As noted earlier, this theme reflects a fundamental purpose of the course; that it should equip participants to become teachers and trainers of Internet applications in their own institutions. Much of the course attempts to put across this concept, if only by example; this theme brings together and focuses the material. The lecture and tutorial sessions deal with general aspects of teaching and leaning, emphasising the necessity of providing a variety of training methods, to suit diverse groups of learners. There is a two-fold orientation: on methods for teaching Internet use and applications, and also on using Internet resources for teaching varied subjects. Students are introduced to the variety of teaching materials now available on the Internet, including web-based tutorials, both interactive and non-interactive, and e-mail courses. They are also encouraged to reflect on, and practice, the basic skills of effective communication: verbal presentation, design of slides and web pages for presentation, advantages and disadvantages of e-mail and similar tools for distance learning, and so on.

Conclusions

'Libraries and the Internet' has been a popular and successful course, receiving the highest ratings in student evaluations of any of CEU's SUN courses.

Students of the course have remained in contact with one another, and the forming a support network throughout the region is one of the most pleasing outcomes of the course. One participant of 1997 has written a book on library applications of the Internet, several have written articles, at least one is undertaking a PhD study in the area. Many are involved in Internet training in their own institutions, and one has organised a major training programme with OSI funding.

The course, as noted above, has had to change to accommodate changes in technology, in the extent of library applications of the Internet, and in the expertise and experience of the participants. In particular, it has moved beyond the 'mechanics' of how to use the Internet, while continuing to promote necessary skills, towards more general conceptions of the role of the library and librarian in society, particularly in the open societies which OSI and NLP exist to promote. Next year (2000), the course will move further in this direction, with Gilster's 'digital literacy' and Crawford's 'complex library' as key guiding concepts; the new title will be Digital Literacy for Open Societies: networked information and libraries.

Web addresses
Information on OSI Budapest may be found at www.osi.hu, and on the CEU and SUN at www.ceu.hu.

Information on the Network Library Program may be found at www.osi.hu/nlp.

A web site for the course for each of the three years it has run, largely created by the participants, may be found via links from the NLP pages.

References

JE Alexander and MA Tate (1999), Web Wisdom; how to evaluate and create information quality on the web, Lawrence Earlbaum

D Bawden (1999), Information literacy, digital literacy, and other literacies; a review of concepts and models. Submitted for publication

D Bawden (1998), Knowledge Management: old solutions for new problems ?, ASSIGnation, 16(1), 10-12

D Bawden, C Holtham and N Courtney (1999), Perspectives on information overload, Aslib Proceedings, in press

D Bawden and I Rowlands (1999), Understanding digital libraries: towards a conceptual framework, British Library Research and Innovation Report No 170

A Cooke (1999), Guide to finding quality information on the Internet: selection and evaluation strategies, Library Association, London

W Crawford (1999), Being Analog; creating tomorrow's libraries, American Library Association, Chicago

P Gilster (1997), Digital literacy, Wiley, New York NY [see also a web primer based on this book at www.rgu.ac.uk/schools/sim/research/netlearn/gilster2.htm]

K Popper (1962), The Open Society and its Enemies (4th revised edn.), Routledge and Kegan Paul, London

D Streatfield and T Wilson (1999), Deconstructing 'knowledge management', Aslib Proceedings, 51(3), 67-71