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EDITORIAL

Oslo Conference Papers

Stephen Parker

All the articles in this issue of IFLA Journal are revised versions of papers presented at the World Library and Information Congress, 71st IFLA General Conference, held in Oslo, Norway, from 14–18 August 2005.

During the WLIC, the Standing Committees of IFLA Divisions and Sections are invited to recommend one paper from among those presented during their sessions for possible publication in IFLA Journal. Thirty-three papers from the Oslo Congress were recommended by the Standing Committees. Each of the recommended papers is reviewed in depth by two members of the IFLA Journal Editorial Committee, who may recommend that the papers be accepted without further revision, accepted with minor revisions, revised and resubmitted for further evaluation, or rejected outright. Papers recommended for acceptance (where appropriate, after resubmission and re-evaluation) are also assessed in detail by the Editor, who may, if necessary, recommend that they be further revised or rejected.

Even though these papers have already been presented at WLIC and are recommended for publication by the specialist Section Standing Committees, the process of evaluation by the Editorial Committee is rigorous. For example, of the first batch of 20 recommended papers from the Oslo Congress, three were rejected outright, eight were accepted with minor revisions, seven were returned to their authors for revision and resubmission, and only two were accepted without the need for revision. This issue contains the first seven papers approved for publication through this process of in-depth review.

The first paper, 'Bibliographic Control in the Nordic Countries', by Unni Knutsen, Chair of the IFLA Bibliography Section, describes the status of legal deposit legislation and national bibliographies in the Nordic countries, with a specific focus on remote electronic resources. It examines how the Nordic countries stand in relation to the various components of bibliographic control and how they meet some of the recommendations from the International Conference on National Bibliographic Services

(ICNBS) in Copenhagen (1997). Legal deposit legislation in the Nordic countries is reviewed and the status of their national bibliographies described. The author concludes with the hope that her paper "leaves the impression that while we live on the edge of Europe we like to think that we are at the cutting edge in terms of bibliographic control!"

The second paper, 'Towards an Accessible Academic Library: using the *IFLA Checklist*', by Margaret E.S. Forrest, Information Coordinator for the IFLA Libraries Serving Disadvantaged Persons Section, describes and analyses the experience of applying the *IFLA Checklist, Access to Libraries for Persons with Disabilities* in the Fife Campus Library at the School of Nursing and Midwifery, University of Dundee, in Scotland. The paper provides an introduction to disability legislation in the United Kingdom, which has been recognized as an important incentive for libraries to improve their services to disabled people, and goes on to consider a number of physical and attitudinal barriers to good practice and the value of using the *IFLA Checklist* to overcome these barriers. The author emphasizes that the checklist should not be seen as a guide to providing a maximum level of service, but as a framework for continual development and improvement. She concludes that the staff of the Fife Campus Library have shown that, through innovative ways of thinking and support from colleagues and students, providing an academic library service to users with disabilities is possible.

The next paper, 'Delivering Sizzling Services and Solid Support with Open Source Software', by Roger Evans of the Oslo Public Library, provides an overview of open source-based services at the library and outlines a plan for international cooperation to produce a customized Linux distribution for libraries. The Oslo Public Library has used open source software effectively, both for office support and as a platform for servers providing multimedia services to the public. This experience has shown that there are substantial savings to be made from using open source for public libraries. By exchanging library-specific open source software packages, libraries can benefit from each other's development expenditures.

In the next paper, 'Successful Web Survey Methodologies for Measuring the Impact of Networked Electronic Services (MINES for Libraries)', Brinley Franklin, Vice Provost for Libraries at the University of Connecticut and a member of the the IFLA Standing Committee on Statistics and Evaluation, and Terry Plum, Assistant Dean at the Simmons Graduate School of Library and Information Science in Boston, report on recent web-based usage surveys of more than 30 North American universities using the MINES for Libraries methodology to determine to what extent electronic resources support research, instruction, and other academic endeavours. The data obtained in this way can give librarians insight into how, by whom and why their electronic resources are being used, and can be used to complement vendor-supplied data to inform collection development decisions.

Electronic resources are also the focus of the next paper, 'From Bibliographer to Curator: archival strategies for capturing web publications', by GladysAnn Wells. Director and State Librarian, and Richard Pearce-Moses, Director of Digital Government Information, both at the Arizona State Library, Archives and Public Records in Phoenix, Arizona. The authors point out that the rapid rise of e-government and the shift from paper to digital documents has had an enormous impact on the library, archives, and records professions, which must adapt their practices, standards, and services to the rapidly changing technological environment if their role is not to be compromised. In order to succeed, those changes must be based on a new understanding of how collections of government information should be managed – the authors use the term, *curated* – not merely recorded in the bibliographic sense. They emphasize that "While *what* we do remains the same, *how* we do that is changing. We can no longer be passive recipients of what we have received through often venerable programs, but must actively capture the information we know will be needed in the future".

The third paper from Norway, 'Norwegian Policy for Empowering School Libraries', by Elisabeth Tallaksen Rafste, of the Faculty of Education at

Agder University College, Tove Pemmer Sætre, of Bergen University College, and Ellen Sundt, of the Norwegian Directorate for Education and Training, begins by presenting a general picture of school libraries in Norway which illustrates the complex and integrated systems in which school libraries are found and looks at the obstacles to successfully maintaining and developing them in Norway. It goes on, using the national plan *Make Space for Reading! Norwegian strategy for stimulating reading abilities and the joy of reading 2003–2007* to show how school libraries can be empowered and the reading habit and reading skills stimulated. The paper concludes by drawing attention to some of the future challenges for school libraries in Norway.

The final paper in this issue takes us away from Norway to Nigeria. In their paper, 'Access to Electronic Healthcare Information Resources in Developing Countries: experiences from the Medical Library, College of Medicine, University of Nigeria', Chris Watts, a researcher at Liverpool John Moores University, and Ijeoma Ibegbulam, Librarian in the Medical Library at the College of Medicine, University of Nigeria, report on a study of the availability and uptake of electronic healthcare information resources in the Medical Library, College of Medicine, University of Nigeria, and examine some of the barriers to providing these resources. They conclude that the main obstacle to access to online health information resources in the library is the lack of an adequate ICT infrastructure, and that physical access to the ICTs that provide that information is clearly a more pressing problem than a lack of available information itself. Both library staff and library users need to develop both the necessary information seeking skills and basic ICT skills to find appropriate resources to meet their requirements.

In the next issue, Volume 32 no. 2, we hope to present a number of papers on libraries and information matters in East Asia, including a paper on the library and information situation in South Korea, the host country for this year's World Library and Information Congress. More papers from the Oslo Congress will appear later in the year.

Towards an Accessible Academic Library: using the *IFLA Checklist*

Margaret E.S. Forrest



Margaret E.S. Forrest is Learning Resources Manager at the Fife Campus Library of the University of Dundee, Scotland. She is a Fellow of the UK Chartered Institute of Library and Information Professionals (CILIP) and qualified as a librarian in 1984. The focus of her work has been in health-care libraries and she has spent most of her career working for the UK National Health Service before moving into higher education libraries in 2003. Margaret is a member of CILIP's Equal Opportunities and Diversity Panel and has a long standing interest in library services for people with disabilities. She has been editor of the CILIP Health Libraries Group Newsletter for ten years and is currently Information Co-ordinator for the IFLA Libraries Serving Disadvantaged Persons Section.

Abstract

Describes and analyses the experience of applying the *IFLA Checklist, Access to libraries for persons with disabilities* to an academic library: the Fife Campus Library at the School of Nursing and Midwifery, University of Dundee, Scotland. An introduction to disability legislation in the United Kingdom provides the legal framework for this paper. In the United Kingdom, this legislation has been recognized as an important incentive for libraries to improve their services to disabled people. This paper considers a number of physical and attitudinal barriers to good practice and the value of using the IFLA Checklist in overcoming some of these barriers.

Keywords: Disabled persons; Access to libraries; Academic libraries; Scotland

Introduction

For over 70 years the IFLA Libraries Serving Disadvantaged Persons Section (LSDP) has championed the promotion of library services to groups of people in society who are unable to make use of conventional services. These groups include people who have a disability, patients in hospitals and prisoners. Responding to growing international interest in disability issues and the need for information on how to make services more equitable, two members of the LSDP Standing Committee prepared an accessibility checklist (Irvall and Nielsen 2005) which was published by IFLA and launched at the Annual Conference in Oslo. The Checklist has also been published on IFLANET and is available from <http://www.ifla.org/VII/s9/nd1/iflapr-89e.pdf>. The aim of the Checklist is to support libraries in making their services more accessible to patrons with disabilities. It is arranged in three sections which focus on physical access, media formats and services (see Figure 1).

Access to Libraries for Persons with Disabilities: Checklist

Physical Access

- Outside the library
- Getting into the library
- Access to materials and services

Media Formats

- Special media formats to support people with different types of disabilities

Service and Communication

- Staff training for disability awareness
- Providing services and information
- Working with organizations supporting people with disabilities

Figure 1. The IFLA Checklist.



The purpose of this paper is to demonstrate how the IFLA Checklist can be used in an academic library to improve access for users with a disability. The example given is the School of Nursing and Midwifery Library at the Fife Campus of the University of Dundee, based at Kirkcaldy, Scotland. An introduction to disability legislation in the United Kingdom, which provides the legal context for this paper, is followed by a description of the barriers to access at Fife Campus Library and how these are being overcome.

Legislative Context

In the United Kingdom the Disability Discrimination Act, 1995 (known as the DDA), places statutory duties on organizations, including libraries, to make reasonable adjustments to meet the needs of disabled people (United Kingdom. Parliament, 1995). The DDA was extended to education following amendments introduced by the Special Educational Needs and Disability Act (SENDA) 2001 ((United Kingdom. Parliament, 2001). The legislation has been introduced in three stages:

From 1st September 2002

It is unlawful to treat disabled students less favourably and there is a requirement to make reasonable adjustments.

From 1st September 2003

Institutions are required to provide access to auxiliary aids and services (e.g. sign language interpreters for deaf students).

From 1st September 2005

Institutions are required to make reasonable adjustments to physical features of their buildings and environment (e.g. provide a ramp for wheelchair users).

The most recent legislation affecting disabled people in the UK is the Disability Discrimination Bill ((United Kingdom. Parliament, 2005). This expands the definition of disability and introduces new statutory duties on public bodies (including universities) to:

- Eliminate unlawful discrimination and promote equality of opportunity for disabled people

- Publish a Disability Equality Scheme (from 1st December 2006).

Under the DDA a 'disabled person' is defined as a person with a physical or mental impairment which has a substantial, adverse and long term effect on his or her ability to carry out normal day to day activities. Long term is taken to be a year or more, but allowance is made for remissions in conditions such as multiple sclerosis. It can include people with:

- physical or mobility impairments
- visual impairments
- hearing impairments
- dyslexia
- medical conditions
- mental health difficulties

In the UK there are 8.5 million disabled people (Disability Rights Commission n.d.). This is approximately one in seven of the population. The aim of the Special Educational Needs and Disability Act is to ensure that disabled people have equal opportunities to benefit from, and contribute to, the learning and services available in higher education institutions.

The Act applies to all the activities and facilities institutions provide for students. This includes elearning and distance learning; learning resources, including libraries and computer facilities; aspects of the physical environment such as buildings, landscaping and equipment; many other services.

Discrimination against disabled students can take place in either of two ways:

- treating them 'less favourably' than other people, or
- failing to make a 'reasonable adjustment' when they are placed at a 'substantial disadvantage' compared to other people for a reason relating to their disability.

Under the Act, there is a responsibility to make 'anticipatory adjustments'. This means that institutions should consider what adjustments future disabled students may need and make them in advance. It is unlikely that every need can be anticipated. However, this is where an accessibility checklist can be especially valuable in preparing libraries to make adjustments before they are required.

Overcoming Barriers to Accessibility

The IFLA Checklist, *Access to libraries for persons with disabilities* (Irvall and Nielsen 2005), is a good example of such a tool. The following is an account of using this checklist in making one academic library more accessible.

In working through the IFLA Checklist, it soon became apparent that a number of physical as well as some attitudinal barriers to accessibility existed at the School of Nursing and Midwifery Library at the Fife Campus of the University of Dundee. The Library is situated on the first floor of a former College of Health Studies. Prior to the College's merger with the University of Dundee in 1996, the Library provided a service in the education of a profession where it was generally considered unacceptable for members to have a disability. Although there are now many successful disabled health professionals, there is still a perception that disabled people are usually patients and therefore should be on the receiving end of the healthcare professions, rather than being involved in delivering and promoting health care. A recent publication by Skill: the National Bureau for Students with Disabilities indicates that this perception is still prevalent in the UK (Skill 2005). A study undertaken in the United States and published in the *Journal of Nursing Education* suggests that these perceptions are still held by some nurse educators in America, 24 years after the passing of the Americans with Disabilities Act, and that teaching staff need training regarding nursing students with disabilities (Sowers 2004).

Although attitudinal barriers to disabled people training to become nurses today are less evident, the legacy of this still exists in the building



Figure 2. Fife Campus Library, University of Dundee.

design and facilities for nursing and midwifery education at the University of Dundee. In spite of the fact that the accommodation at Fife Campus was built as recently as the mid-1980s, there was no legal requirement at that time to install a lift and no incentive to provide one from teaching staff whose vision of their profession did not encompass nurses or midwives with disabilities.

Learning and teaching at the Campus has continued to focus on the subjects of nursing and midwifery. The Campus Library, however, is part of the University-wide library service and is open to all staff and students. Other disciplines taught at the University do not have the same history of attitudinal barriers as the health professions and have generally welcomed the recruitment of students and staff with a diversity of access requirements. Situated approximately 40 miles (64 km) from the City Campus, the Library at Fife is used by a significant number of staff and students who live locally and are able to make use of the full University Library stock through a van delivery service between site libraries of the University.

Although a number of barriers to access still exist there are now increasing drivers for change from both the legal and the institutional context and a pressing need for the library service at the Fife Campus to be more inclusive and enable better access to users with disabilities. The remainder of this paper focuses on the experience of the library staff at Fife Campus in working towards providing a more accessible service.

Working Towards Accessibility

Institutional Support

In August 2003, the appointment of a new member of staff with a disability and experience of developing an accessible library service may have contributed to an increase in interest and awareness among other library staff and the need to make reasonable adjustments to accommodate users with disabilities. Soon after this appointment, the Senior Library Assistant volunteered to become the Library's Disability Services Officer, an important liaison position between the Library at Fife and Disability Services of the University, based at Dundee. This contact has enabled the Library to keep up to date with developments in disability access at

the University and staff training in this area. Regular visits to Fife Campus by one of the Disability Advisers have included visits to the Library and support in making the resources more accessible to readers.

Interest in disability access at the Fife Campus soon became focussed on the Library and when equipment for disabled students was purchased for use at the Campus, this was promptly 'acquired' by library staff to enable students with disabilities to access electronic resources. In addition to support from Disability Services, help and advice was obtained from IT Services at the University in the development of an eAccess Area.

The more expensive pieces of equipment (the height-adjustable table and chair and multimedia computer and scanner) were purchased by Disability Services with support from IT Services. Less expensive 'accessible accessories' were funded from the library budget. These items include: an adjustable keyboard, an expert pro trackball and gel mouse, wrist rests and a neck loop (for hearing impaired users). Accessible software was installed onto the computer to enlarge and enhance text and images on screen (Zoom Text), help with reading (with a synthetic voice reading text on screen) (Text Help) and help with concept mapping (Mind Genius). Additional equipment includes a CCTV magnifier and coloured overlays for students with dyslexia.

With support from other departments within the University (especially Disability Services and IT Services), the Library staff were able to make a significant improvement in providing a more accessible library service.

Using the IFLA Checklist

With some of the groundwork completed, the next step was to conduct an access audit of the library services. 'Access audits' are generally used to describe a process by which a building or organization is evaluated for its accessibility to disabled people (Delin 2003). An access audit report would enable the library staff to gauge the level of service currently provided and enable future planning to be focussed on areas of improvement. Unfortunately, the estimate for an external company to carry out an access audit at Fife Campus Library in 2004 had proved to be too expensive. However, there are a number of published resources which make it possible to carry out a self audit of library services and one

of these is the IFLA Checklist (Irvall and Nielsen 2005).

Using the IFLA Checklist, Library staff at Fife Campus carried out a self audit with reference to the three main sections which focus on: physical access, media formats and service and communication (see Figure 1).

Physical Access

The first section of the checklist focuses on the physical access, using a "journey sequence" to cover all the access points from street level through to the entrance of the library. At Fife Campus, the area outside the main building was found to be accessible with sufficient parking spaces marked for disabled users close to the entrance. There is clear signposting and unobstructed and well lit access paths to the entrance. Within the reception area of the building there is adequate space for wheelchair manoeuvrability and an accessible toilet on the ground floor. However, access to the Library itself is more problematic. Situated on the first floor of a building with no lift or chair elevator on the stairs, clearly prevents the Campus Library from checking any of the points in the IFLA Checklist concerned with 'getting into the library'. Although the University plans to install a lift at the Fife Campus, this has not been installed in time to meet the legal requirements of the Special Educational Needs and Disability Act for September of 2005.

Within the Library, however, access to materials and services was found to be good and most of the IFLA Checklist points were satisfied. The new eAccess Area provides access to a reading and computer table of adjustable height and a chair with sturdy armrests. Aisles are unobstructed between the bookcases and staff are available to retrieve materials from the shelves when users request this support. There is a visible and audible fire alarm in the Library, which is regularly tested, and staff are trained to assist users in case of an emergency. The circulation/enquiry desk is well-positioned close to the entrance of the Library and near a seating area. However, it was noted that no loop induction system was available at the desk and that one would need to be fitted.

Media Formats

The IFLA Checklist recommends that "all library materials should ideally be accessible for

all customers". Although the University has few materials in Braille or large print, it does subscribe to several thousand ejournals and ebooks which are accessible to staff and students both on and off campus via the Library website. Where textbooks are published in both audio and printed format, both formats are purchased by the Library to enable access for print-disabled users. Videos and DVDs with subtitles are purchased where possible and a closed caption decoder is available for use in the Library to enable deaf patrons to read 'hidden captions' which are available on many videos.

In the section of the IFLA Checklist which covers computer equipment, Fife Campus Library scored highly, mainly due to the innovative eAccess Area.

Service and communication

Under the final section on Service and communication, the authors of the IFLA Checklist stress the importance of good staff training in disability awareness. Dundee University Library is especially fortunate to have a member of staff who has been involved in disability awareness training for many years and has co-authored a guide for supporting students with disabilities (Charles and Foster 2004). This guide has been used extensively at the University Library and is one of the recommended resources in the Disability Rights Commission's good practice guide for libraries and learning centres (Disability Rights Commission 2005).

The IFLA Checklist suggests a number of special services which could be made available to patrons with disabilities. The appropriateness of these services will vary depending on the type of library using the checklist. Additional services available from the Fife Campus Library include the following:

- help finding and using library materials
- extended borrowing time with short loan materials
- different format and coloured paper for all library publications on request, e.g. using yellow paper has been found to be helpful for library users with dyslexia
- confidential advice and help from the Library Disability Services Officer

Evaluation

An important recommendation made by the Checklist authors is that "representatives from disability groups should be included in the evaluation process". Earlier this year Fife Campus Library staff began work on an impact assessment study of its services to users with disabilities. A pre-study questionnaire was distributed by email to all Fife students registered with Disability Services. Paper copies of the questionnaire were also made available to walk-in users of the Library. The main purpose of the survey was to gauge users' awareness of the new eAccess Area facilities and request support from users to help library staff develop these services further.

Although the response rate to the questionnaire was low, library staff gained useful information from the exercise. The responses stressed the need to improve the Library's marketing and promotion of facilities for users with disabilities and to run training sessions on the new equipment. The most valuable outcome of the survey has been the support obtained from two dyslexic nursing students who joined the Library's Access Focus Group. Using the checklist findings from the self audit in addition to support from disabled students, Fife Campus Library is now in a much stronger position to plan and provide the necessary 'reasonable adjustments' required by the Disability Discrimination Act and SENDA.

Conclusion

This paper has attempted to provide an introduction to the legal context of disability equality in the UK and the response of one academic library to the requirement to make its services more accessible for users with disabilities. The value of using the IFLA Checklist in establishing the parameters of the service has been emphasized. However, it is important that the checklist points are not seen as providing a maximum level of service, but as a framework for continual development and improvement (Scottish Accessible Information Forum 2004). The authors of the IFLA Checklist suggest that "it is often a question of changing attitudes and thinking in new ways". The experience of the staff at Fife Campus Library reflect this: they have demonstrated that through innovative ways of thinking and support from Dundee University colleagues and students, providing an academic

library service to users with disabilities is possible.

Acknowledgement

Many thanks to all my colleagues at the University of Dundee Library who supported me in the preparation of this paper. In particular, I would like to thank Dawn Adams and Sandra Charles for their creativity and inspiration in developing the service at Fife Campus Library.

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Delivering Sizzling Services and Solid Support with Open Source Software

Roger Evans



Roger Evans is a computer programmer and network consultant with 25 years' experience spanning IBM mainframes, mini-computers, PCs and the Internet. A graduate of the University of Texas at Austin and the University of Oslo, he has worked in the fields of network implementation and application programming for customers in both North America and Europe in the fields of banking, telecommunications and local government. For the past 4 years, he has been employed at Deichmanske Bibliotek/The Oslo Public Library with responsibility for branch networking, self-service and RFID implementation. He may be contacted at: Deichmanske Bibliotek, Henrik Ibsensgt. 1, 0178 Oslo, Norway. Tel: +47 93 25 92 36. E-mail: rogere@deichman.no. Website: <http://www.deichman.no>.

Abstract

Gives an overview of open source-based services at the Oslo Public Library, and maps out a plan for international cooperation between libraries to produce a customized Linux distribution for libraries modelled on the Norwegian 'Skolelinux' project. Deichmanske Bibliotek/The Oslo Public Library has used the open source LAMP (Linux, Apache, MySQL, PHP) for both office support and as a platform for servers providing exciting multimedia services to its target public. If proprietary software had been used, the costs would have been significantly higher and would in most cases have been prohibitive, so that the projects would never have been realized. On client computers, the LOOM combination of open source products (Linux, Open Office, Mozilla) has enabled the library to install many more public computers than would have been possible with a proprietary platform.

Keywords: Open source software; Oslo Public Library

Introduction

We at Deichmanske Bibliotek/The Oslo Public Library decided three years ago that we wanted to branch out beyond the OPAC and experiment with multimedia Internet services to reach our target patrons, and at the same time develop our staff's skills to prepare for our projected 'Library by the Fjord' into which we hope to move in 2009. But how were we to do this in a budget that was shrinking in both real and absolute terms?

Internet Services on License-Free Servers

We did not have the funds to buy the commercial tools to implement web-based services. We might be able to raid the book budget one year to put the products in place, but we could hardly expect to be able to operate them while paying recurring license fees.

To provide a system based on IBM's Web Solutions or Oracle, or Microsoft's web server, would have meant closing a branch to free up resources, which was a political impossibility.

Our solution was to contract and implement new online services using open source software, specifically the LAMP software suite (Linux, Apache, MySQL, Perl/PHP), along with a few other free products such as the Darwin Streaming Server, an open source version of Apple Computer's QuickTime streaming server.

The LAMP suite of Open Source Tools

Linux

The open source operating system written originally by Linus Torvalds in Finland, and later enhanced by thousands of independent programmers and companies such as Red Hat in the United States, SuSe in Germany and Mandrake in France, Red Flag in China. Linux can run on your desktop or your biggest server, it is free, and the source code is open for all to see.

Apache

The open source web server (<http://www.apache.org>) that powers some 70 percent of web sites worldwide.

MySQL

The open source SQL database system from MySQL AB in Sweden. This database system is robust, flexible and scalable enough to replace commercial databases such as Oracle, Informix or IBM's DB2 on any library application. Another open source SQL database system is PostgreSQL which is functionally equivalent – but alas, doesn't begin with an 'M'.

Perl/PHP/Python

Open source programming languages for programming web applications. All are in widespread use, easy to learn, and fortunately for the acronym, each begins with a 'P'.

The components of LAMP are independent. Each of them has multiple open source and proprietary equivalents that are compatible with the other LAMP components.

MySQL and Apache and Perl function well on Microsoft Windows platforms and on Free BSD, another free operating system, and if you don't like MySQL for some reason, Oracle and PostgreSQL are two excellent SQL database systems that are solid substitutions.

PostgreSQL is open source and won't cost you a single book for your collection. Oracle will set you back about the price of 100 books for your collection, and that is excluding the recurring yearly license fee.

Although there are any number of alternatives to each of the four components of LAMP, the number of projects and packages that use all four of them dwarfs any other single combination of tools on the SourceForge repository of open source software: <http://sourceforge.org>.

They have come to the fore in the universe of open source tools because they are easy to implement, extremely efficient on all sorts of hardware, and they each have solid communities of active developers adding functionality and fixing bugs.

Using the LAMP suite on our own servers we have made the following services available for Oslo's library patrons:

Ask the Library

This is an online reference service – now merged and developed as a national service with chat and SMS: 'Library Answers'. This project was supported by the Norwegian National Archive, Library, and Museum Authority. URL: <http://www.biblioteksvar.no>

City Diary

This is a publishing site for young people which provides them an interactive forum for reporting on what's happening around town. What do you see, what do you think? Is there something you hate or something you think too great to keep secret? Let your creativity loose in your own neighbourhood – publish text and pictures on your own site in City Diary. This project received support from the National Broadband Research Authority. URL: <http://www.bydagboka.no>

Bazaar

This is a multicultural, multilanguage portal serving the immigrant population in Norway, supported by the Ministry of Immigration, the organization 'Fritt Ord', and ABM Utvikling, the National Authority for Archives, Libraries and Museums. URL: <http://bazar.deichman.no>

Detektor

This is a general-subject net portal with quality-controlled, catalogued links to and descriptions of over 3000 useful sites. Detektor is a net portal for everyone, but has a special focus on resources of use to primary and secondary pupils. URL: <http://detektor.deichman.no>

Is This Where I Belong?

This is a joint effort with schools and branches to research and present neighbourhood history on the net. Students use their project hours to develop local history subsites, focusing on identity and a sense of belonging in terms of one's neighbourhood. URL: <http://www.erdether.no>

Reaktor

This is a low-threshold multimedia publishing system for all of the library's patrons. URL: <http://minreaktor.deichman.no>

For each of these services, we either contracted with a small software house that specializes in open source software development, or we used students from the School of Library Science to program them. Our motto for these projects was 'lean and mean'. We kept specifications simple, and requested that only open source (free) software be used. In this way, we avoided recurring license costs and expensive maintenance agreements. Our services run on our own servers at the library. These servers, like the server for our Integrated Library System (ILS)/OPAC, run on Linux. Our staff handles all the operation of the servers, and at the same time, provides support for our computer and network installation.

Without open source software, and the generosity of our sponsoring entities, these products would never have seen the light of the Internet.

Open Source Client Computers

Open source is not just for servers. We provide workstations for staff and patrons based on open source software for substantially less than the cost of a workstation based on Microsoft products. A pleasant and economical benefit of using Linux on client workstations is that they are virtually immune to viruses. In the three years we have used Linux workstations, we have never had a virus infection. To our knowledge, we have never been 'hacked'. No spyware ever infects our Linux-based public Internet terminals. We certainly can't say that about the Microsoft Windows computers we have installed. Windows computers require licensed software to check for installed viruses and, in the case of public machines, to copy a pristine image onto them every day.

Like all public libraries, we are constantly faced with cost pressures as local governments respond to political demands for cutting expenditures in real terms and price pressures on the components of the services we provide. Marginal IT expenditures must be paid for by either cuts in media expenditures or opening hours. We think long and hard before we invest in a new platform. IT, while a critical success factor, is not our primary product. It is a political necessity that books for loan are at the centre of what we do. We aim to use most of our resources on mission-critical products, that is, our ILS and digital services. When we consider a new service or system, we like to estimate what it will cost in terms of the average acquisition cost of books.

Using LOOM to deliver Reliable Client Computing

Whenever we acquire a free Pentium-based computer, we clone our client platform. LOOM (Linux, Open Office, Mozilla Firefox) onto its disk, along with the client part of our ILS. Such a machine can be used for staff or the public anywhere in our system. Our IT staff can log into any of these machines from their office to upgrade or reconfigure them for either public or staff use.

In October 2000, Sun Microsystems released its Star Office suite as an open source project. We had never had the funds to provide a full-fledged office suite such as Lotus or Microsoft Office to all our staff, but with the release of the Norwegian Open Office 1.1 in 2003, an alternative became feasible. After testing Open Office at the main library for a month, we offered it on all our staff computers, and on our public access Internet computers. Open Office has been translated into hundreds of languages, including the two official languages of Norway. A project is also afoot to translate it to Northern Sámi. Our experience with Open Office is that it is *good enough*, and many of our staff prefer it to Microsoft Office. We have saved about half a million kroner by using it instead of Microsoft Office. These savings are the equivalent of the cost of acquiring 2,300 titles for our collections. These savings have come both in license costs, and in the possibility of using cheaper, and in some cases free, hardware.

Free OPAC Computers

We upgraded our branch network to broadband speeds in 2002, and this gave us the possibility

to finally offer computers dedicated to OPAC access. Previously, the judgement of our branch managers was that with bandwidth available for only one or two public machines in each branch, it was not desirable to dedicate these to OPAC access. The public could access the OPAC on the Internet computer we had in each branch. But the long lines for the one or two public access machines, and the necessity for waiting until another user had checked his e-mail and surfed the net, meant that most queries had to go through a reference librarian. But now that we had sufficient bandwidth to provide multiple dedicated OPAC terminals, where were we to get the money for the computers?

By a stroke of good fortune, the city's tax office, a Microsoft user, was at the end of its product cycle with Microsoft-based computers. The tax office channels Norway's generous tax revenues to its politicians, so they are not under the budget pressures of libraries. They can afford Microsoft. They magnanimously offered us their cast-off Pentium 200-class machines, albeit with disks completely wiped clean of operating system, data (and viruses, too). We took these machines and loaded Linux onto them, and restricted access to our OPAC. Thus for no investment at all (except for the time spent cloning the machines), we were able to provide dedicated OPAC access at all branches.

Linux-Based Loan Desk

We have found other uses for these cast-off machines: our Integrated Library System (ILS) from a Norwegian vendor, although not open source, is written in a cross-platform open source language, TK/TCL, so it is portable across Windows and Linux. For the marginal cost of the scanners, we could offer extra circulation desks for peak time service and replace our old virus-prone Windows 95 computers. A new Windows XP computer (without Microsoft Office) providing the same capability costs about the same as 48 books for our collection during its lifetime.

Linux Based Public Internet Access Machines

We have also made these free computers available as public Internet access machines with LOOM. If you visit the foyer of our main library, you can check your e-mail on these computers, which are limited to 15 minutes per patron. No reservations are required. Microsoft Windows computers that do the same job cost us 32 books

apiece, and are substantially more complicated to administer and keep clean from viruses.

Linux as Internet Protocol Infrastructure

At the infrastructure level, we have used these free Linux computers as firewalls, encryption routers, Internet address servers, and domain name servers. The tools for these tasks are included with any standard Linux distribution and can be downloaded free:

- 'iptables' for firewalls (<http://www.netfilter.org/>)
- 'IPsec' for encryption routing (<http://www.free-swan.org>)
- 'dhcpd' for internet address server (<http://www.isc.org>)
- 'bind' for Domain Name Service (<http://www.isc.org>)

We find that 8–10 year old Pentium computers are quite capable of performing these tasks. We try to use one free computer for each task, but configure them as rollover backups for each other. Thus a DHCP server might also be configured as a backup for another machine used as a DNS server. Every time we use such a computer instead of a proprietary solution, we save enough to buy some 20 books for our collection.

Summary of Experiences

Deichman's Experience

Our experience at the Oslo Public Library with open source software has shown us that we can save money, which can be used for acquisitions and enhanced opening hours. We can deliver exciting new services on a shoestring. Free and inexpensive used clients and new servers costing 70–80 percent of a similarly powerful Microsoft server mean we can deliver more with less. License costs alone for clients typically are no more than 6–7 percent of the cost of ownership for a client, but savings come in the possibility of using cheaper hardware to provide the same service, and the fact that a Linux computer has a longer product cycle than a similarly configured Windows computer.

However, we cannot plan our future development solely on cast-off hardware. When we move into the new library, we expect to purchase something on the order of 1,000 workstations to support the expected growth in digital

Platform	Purchase price (NOK)	Life (years)	Depreciation per year (NOK)	License costs (NOK)	Virus protection per year (NOK)	Server costs (NOK)	5-year cost (NOK)	Book equiv
Linux	2128	5	426	0	0	833	2961	13.7
Mac	5900	5	1180	4850	0	0	10750	49.7
MS Windows	4870	5	974	2500	1075	833	13578	62.8

Table 1. Direct cost comparison – platforms for public computers.

collections. Our experience in pilot projects shows that open source is cost effective on new, purchased computers as well. Our cost of ownership comparison for the three platforms we support can be summarized in Table 1.

All currency amounts in Table 1 are in Norwegian Kroner and include Value Added Tax. The five-year cost does not represent a traditional ‘Total Cost of Ownership’ calculation, because it does not include training and deployment costs that we find are about the same for all platforms. It does include labour costs for virus cleaning on the Windows platform, that we estimate to be on average one hour’s labour per machine per year, and the cost of virus and spyware protection and removal software. We use Linux file servers for both Windows and Linux platforms, but not Mac.

The primary purpose of this comparison is to help us choose the mix of public computers for our new main library. We anticipate providing all of these computers in some proportion for our patrons, and every reading room seat will have a computer for access to digital collections. We want to provide some access to the applications that are only available on Mac and Windows, especially multimedia editing and digitization. But 90 percent of our public access is browser-based, and is adequately provided by all of the platforms.

With the introduction of the Mac Mini from Apple Computer, it is possible to use the same 19-inch flat screen, USB keyboard and mouse for all three platforms. Therefore, cost calculations do not include the purchase of these items. The cost indicated in the table for the Linux client is for a Hewlett-Packard t5525 Linux network client that boots a fully functional Linux kernel from flash memory and includes the Mozilla Firefox web browser. It runs Open Office from a file system mounted from a Linux

server. We use Linux servers for both Windows and Linux workstations, and the server costs for each platform (except the Mac) include a proportion of a dual-processor file and application server.

It should be noted that these costs include the licenses for Microsoft Office packages in both the Mac and Windows platforms. In practice, we offer Open Office on the Windows platform, and in some cases do not purchase Microsoft Office. This will decrease but not eliminate the book-equivalent cost of the platforms. But since the purpose is to show ALL the savings that can be obtained by using open source, it is still a fair comparison. Unlike Adobe (with its Acrobat Reader) and Macromedia (Flash), Microsoft does not make its packages available for Linux.

Open Office has only recently (version 2.0) been stable on the Mac. And we will be testing it for suitability. Mainstream vendors are now offering client hardware without Windows, and for which one does not pay the ‘Microsoft Premium’ for the installed operating system. This is a significant development that creates new opportunities for organizations to take advantage of open source in their new computer purchase decisions.

What are the hurdles we have encountered with open source Software? Fully utilizing open source demands leadership support, and an enthusiastic staff and some Linux knowledge, or the willingness to learn Linux. Deichman’s dedicated and competent staff has had fun while deploying LAMP and LOOM, while raising the standards of service to our patrons. However, the necessity of supporting legacy Windows and Mac platforms has made it a challenge to find time to exploit the possibilities of Open Systems.

Other libraries might have computer support personnel who are trained on Microsoft and

who might resist the process because they do not want to learn something else, or merely because they do not have the time to learn the skills involved.

Consultants hired by city bureaucrats will often discourage or even forbid the use of open source software because they want to keep their contracts. There are many reasons to waste public funds and most of them have to do with the sales process of vendors. Our library has been subjected to an IT strategy document that dictates proprietary software on computers that use the city's administrative applications. Implementation of this dictate is costing us about 660 book-equivalent-units in the period 2005–2006, and provides no benefits at all to our patrons. Microsoft and other vendors have extensive lobbying efforts to keep open source out of public entities, so frequently these decisions are not the library's. Without strong support and commitment of our library administration to responsible stewardship of scarce library resources, we could not have resisted the blandishments of salesmen and the dictates of vested interests in the city administration.

Arizona State University, West Campus

Another documented open source library conversion is the West Campus of the University of Arizona, Glendale (ASU). They have documented their conversion to an all-Linux library on the American Library Associations website (Horner, 2004).¹ ASU has reported a 50 percent saving in Total Cost of Ownership (TCO) after converting from a proprietary Microsoft platform.²

An interesting feature of ASU's conversion is that they have developed a 'fat' diskless client for student use in the library. Typically, a 'thin' diskless client manages its own screen and keyboard, but runs its programs on a central server, a division of labour that wastes processor cycles on the client, and demands an expensive server. The 'fat' diskless client that ASU has implemented downloads a local disk image to memory, and executes its programs on its own processor. This solution should be scalable upwards to hundreds of diskless workstations with even a modest server. The technical details are documented by ASU's Library Technology Coordinator, Perry Horner, on the ALA site.³

Open Source and Intellectual Property

Librarians are taught to respect and protect intellectual property. The use of open source software helps protect against software piracy. The Free Software licenses: General Public License (GPL), Copyleft, etc., openly encourage the copying and distribution of these packages. To the extent that people refrain from copying proprietary software illegally, and use the free equivalents, open source software is a powerful antidote to software piracy. We at Deichman are very protective of Microsoft's intellectual property rights. We have Windows computers in addition to Linux, and we scrupulously avoid installing any proprietary package without a license.

How Is Open Source Software Possible – and will it last?

If a library is going to build its critical services with open source software, how can we know it will be here in 10 years? Economists tell us again and again that there is no such thing as a free lunch. Microsoft's salesmen and paid publicists use a lot of money to denigrate open source, and to spread Fear, Uncertainty and Doubt about the viability of an open source strategy.

Every day in our reference work, we take advantage of Google, Project Gutenberg, and Open Access Journals without paying anything for the privilege, or without violating intellectual property rights. To know why open source software will persist, it is instructive to look at how it comes into being from the public or the private sector and the business models that enable it to thrive.

Contributions from Public Institutions

A group of programmers working for a tax-supported government entity produces a piece of software that they make available to everyone by putting the source code into the public domain.

The Horowhenua Library Trust in New Zealand contracted with a consulting company to produce Koha, a LAMP-based open source Integrated Library package. Koha is the Maori word for 'Gift', and Horowhenua offered a generous gift to the libraries of the world. Thanks to the Horowhenua Library Trust's generosity and

foresight, a new library can implement an Internet OPAC for the price of a small Linux server.

Public libraries do not compete with each other. A library that needs some functionality can contract to provide it, and release it as open source. It will take on a life of its own. A library that needs functionality such as NCIP or RFID support that Koha does not support, can offer to fund its development. The Koha support team at www.koha.org will coordinate your efforts and put you in touch with a developer that can do the job, and the whole community will benefit. They are currently looking for sponsors for a portal suite, EDI-based acquisitions and a faster implementation of search routines.

Although there are other efforts at a MARC-based open source ILS, only Koha seems to have reached the critical mass of developers and users to make it a viable choice for libraries that want to use open source for this critical application. Following the Koha support mailing lists is instructive: a recent posting with a requirement for supporting Chinese characters took less than two weeks to provide. Consulting companies in New Zealand, the U.S. and Europe are now receiving the bulk of their income from Koha support, and enhancements for one library are available for all. Details of support arrangements can be found from links on the Koha website.

Contribution from Private Corporations

A corporation sometimes releases its product under an open source license, in the hopes of creating a market for its consulting services, or to tap the community of open source developers to enhance a parallel commercial product.

Thus MySQL AB in Sweden wrote and maintains the MySQL database source, licenses it both under the GPL for open-source products, and a commercial license for organizations that want to include MySQL in another commercial package. In return for making the source code available, it always has a world-class product with many thousands of users and developers. It is the premier (and profitable) provider of training and consulting services using this outstanding product.

Similarly, Sun Microsystems developed Star Office and then turned the code over to the Open Office consortium. Sun realized that it could never successfully compete with Microsoft

in the integrated office suite mass market, so it essentially gave up that market. But rather than throwing their product away, they gave it to the community to create goodwill, and to draw on the resources of the community to enhance a product that otherwise would have disappeared. And for organizations requiring specialized office packages, Sun can still sell Star Office, with all the internationalizations and enhancements provided by the Open Office community.

Apple Computer makes Darwin, an open source version of its QuickTime Streaming Server, to tap the resources of the open source programming community. In this case, Apple's motivation was likely defensive: making Darwin available as an open source product strengthens its QuickTime format to counter Microsoft's Windows Media Player, and it creates a volunteer programming staff to enhance Darwin that would cost Apple dearly if they had to pay them salaries. Clever licensing (Apple's own Apple Public Source License) ensures that changes to Darwin can be incorporated into Apple's proprietary streaming server.

There are sound business reasons for a corporation to release a product as an open source package, either to promote the sale of a parallel product, or to press an advantage against a competitor. Unlike a free program released as an executable ('shareware'), a product released with source code under the GPL can never be taken back and made proprietary.

Library-Specific Open Source Packages

The last 3 to 4 years have seen the development of a number of outstanding open source library packages. Three in particular have reached the critical mass of users and developers that ensure continued survival and refinement:

- Koha the open source, MARC-based ILS as mentioned above. Now released as version 2.2.
- The Greenstone system based on Dublin Core (University of Waikato, New Zealand, <http://www.greenstone.org>) for digital collections. Current version, 2.60.
- Keystone Digital Library Suite (Indexdata A/S, Denmark: <http://www.indexdata.dk>). Indexdata has provided an open source z.39.50 component that has long been used in Koha and as a stand-alone z.39.50 client. Indexdata now makes Keystone available for

download as an open source product as well as offering custom solutions to libraries and consortia. Indexdata is also providing the bibliographic database engine for version 3.0 of Koha, thus enabling the ILS to scale up to libraries with millions of volumes.

A Path to the Future

To develop open source further in the library, we propose an initiative to establish the LibraryLinux Custom Debian distribution. Based on the free Debian Linux distribution (<http://www.debian.org>), and modelled on the Debian-edu project, otherwise known by its original Norwegian name 'Skolelinux', efforts are now underway to merge Skolelinux with the educational version of Ubuntu Linux from the Ubuntu Foundation (<http://www.ubuntu.org>).

Library Linux will be a single CD that can be used to install several types of Linux-based computers:

Main Library Server

A server with all of the library-specific applications mentioned above installed with a basic working configuration. This can be a small server with 10–20Gb disk and a 1 MHz processor. It does not need any windowing system, as it can be managed from another workstation.

Branch Library Server

A server for diskless workstations for public Internet access, and a file server for staff. Diskless computers can be added by configuring these to boot from the branch library server. This server is the most demanding for hardware. It should have at least 1 GHz processor and ideally, 2 processors, and 2 Gb of internal memory. The diskless workstations should have at least 256 Mb of memory, and preferably have a bios for booting from the network. For a small library with a powerful server, the Main Library Server and Branch Library Server can be combined.

Back Office and Reference Workstation

A workstation with Open Office and the Firefox web browser with restricted (staff) access to the ILS. These can be any size. We have been satisfied with second-hand Pentium 233 MHz. with 3 Gb. disks.

Public Internet Access Terminal with Open Office

A more complete public Internet access computer with Open Office, and other applications that the library might want to make available to its patrons. These can also be class-class computers with limited memory and disks, or like ASU's 'fat' clients, large memories and no disks.

The motivation for Library Linux is to make it easy to start using Linux in your library. All of the packages for Library Linux can be used on other Linux distributions. But a custom library distribution would make it easy to set up a whole library with a single CD.

Conclusions

Open source software was a snowball in the 1990s, and is developing into an avalanche. It is past the 'pioneer' stage, and stands at a tipping point similar to the stage of adoption of the mini-computer in the 1975 and the PC in 1985. The economics are clear: like the diehard users of the IBM mainframes and makers of buggy whips, the defenders of proprietary file formats and software license regimes will eventually go the way of the dinosaurs. Library-specific applications have reached a critical mass such that future support and development is assured. Virtually any service which a library might want to provide is available with open source solutions, both on the client and server. There are substantial savings to be gained from using open source for public libraries, and there is money to be made for vendors who base their services on open source software. If a library is well-funded and its IT staff is provided by another organization or government entity, it will probably choose to remain proprietary. But libraries with pressed budgets and enthusiastic staff can do extraordinary things with open source software and the LAMP and LOOM software suites. By opening up to the exchange of library-specific packages, libraries can benefit from each other's development expenditures.

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Successful Web Survey Methodologies for Measuring the Impact of Networked Electronic Services (MINES for Libraries)

Brinley Franklin and Terry Plum



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Abstract

MINES for Libraries is a web-based survey methodology that is proving to be a valid and reliable method for assessing networked electronic resources usage. The methodology has collected usage data on the libraries' electronic resources, including electronic journals, electronic books, databases, the online catalog, and services such as interlibrary loan. It can also integrate data on non-subscription resources such as digital collections, open access journals, pre-print and post-print servers, and institutional repositories. This web survey method is more successful in libraries that have implemented a network assessment infrastructure. To illustrate its utility, an overview of the methodology, a discussion of assessment infrastructures, and recent results from MINES for Libraries surveys at more than 30 North American universities during the last 2 years are presented, including health sciences libraries, main academic libraries, and a Canadian library consortium of colleges and universities.

Keywords: Electronic resources; Use; Surveys; World Wide Web; MINES for Libraries

Introduction

Web-based usage surveys are increasingly relevant in the collection of usage data to make collection development and service decisions, to document evidence of usage by certain patron populations, and to collect and analyze performance outputs. This paper discusses web-based survey methodological considerations and reviews results from the MINES for Libraries™ web-based survey at more than 30 North American universities between 2003 and 2005.

The most popular current method of measuring usage of electronic resources by libraries is not through web-based usage surveys, but through vendor-supplied data of library patron usage or transaction-based usage. There are several standards-making groups involved with setting consistent measures of usage across publishers and products:

- Project COUNTER – Counting Online Usage of Networked Electronic Resources (<http://www.projectcounter.org>)
- ICOLC – International Coalition of Library Consortia (<http://www.library.yale.edu/consortia>)
- ISO – International Organization for Standardisation – ISO 11620 Library Performance Indicators (<http://www.iso.org>)
- NISO – National Information Standards Organization – NISO Z39.7 Library Statistics (<http://www.niso.org>).

Release 2 of the COUNTER *Code of Practice* for vendors to obtain COUNTER-compliant certification was released in April

2005 (http://www.projectcounter.org/code_practice.html). ICOLC issued updated guidelines of their *Guidelines for Statistical Measure of Usage of Web-Based Information Resources*, for reporting online database and journal usage in December 2001. NISO under Z39.7-2002 has developed its *Draft Standard for Trial Use: Information Services and Use Metrics and Statistics for Libraries and Information Providers Data Dictionary*.

The North American Association of Research Libraries (ARL) *E-Metrics Project* (<http://www.arl.org/stats/newmeas/emetrics>) is a parallel effort to develop new measures that describe and measure networked electronic resources, based upon the *Data Collection Manual* written by Shim and others (2001).

Why is there such an emphasis on vendor-supplied data for evaluating electronic resources? Vendor-supplied output data of networked electronic resources have been considered the standard benchmark because they are based on patrons' interaction with the networked electronic resource marketed or paid for by the library. The units of measure generally agreed upon across the relevant standards-setting groups are based on usage of the resource in some way; either usage by session, queries, views, downloads, prints, etc. The closer the usage data is to the actual transaction or use of the resource, the more reliable or fundamental it seems to be assumed to be.

Another type of data collection of users and usage of networked electronic resources can be done through the web survey. But there are several reasons that the web survey has usually not been as trusted as vendor-supplied data to produce usage data:

1. The quantitative usage data such as prints, queries, etc., are usually a census, in which all are counted, whereas the web survey is based upon a sample.
2. A truly random sample research design is difficult to create using web surveys.
3. The samples of many web surveys are non-probability based, and therefore not open to inferential statistical statements about the populations.
4. Non-response rate for web surveys is often high, and may introduce bias. The respondents may not be representative of the population.

5. Web surveys have in the past been used to collect data about users or about sessions, but not about usage. Therefore the data they collect are not the more fundamental usage data collected by vendors of networked electronic resources.
6. The population may not be well defined.
7. Web surveys, because they focus on users, are often collections of impressions or opinions, not of more concrete actual usage, and are therefore not trusted to yield reliable data that can be compared to itself over time.
8. They are often not based on real usage, but upon predicted, intended or remembered use, introducing error.
9. Web surveys may not appear consistently when viewed in different browsers, thus affecting the results in unanticipated ways.
10. Because users have unequal access to the Internet, web surveys introduce coverage error.

A useful summary of web-based survey considerations by Gunn (2002) identifies many of the issues associated with web-based surveys, while Covey (2002) and Tenopir (2003) review user and usage surveys, including some administered through the web.

MINES for Libraries™

A web survey technique that attempts to address some of these problems is 'Measuring the Impact of Networked Electronic Services', or 'MINES for Libraries™' (<http://www.arl.org/stats/newmeas/mines.html>). The primary difference between the MINES for Libraries™ approach and many of the other web-based user surveys is the emphasis on usage. Although user demographic information is collected, the web survey is really a usage survey rather than a user survey. The respondent must choose the resource in order to be presented with the survey, therefore memory or impression management errors are avoided. Users are presented with the survey as they select the desired networked electronic resource or service. Once the survey is completed, the respondent's browser is forwarded to the desired networked electronic resource. This approach is consistent with the random moments sampling technique. Each survey period is at least two hours per month, so each survey period in itself is only a snapshot or picture of usage. Because the survey periods are randomly chosen over the course of a year and

result in at least 24 hours of surveying, the total of the survey periods represents a random sample, and inferences about the population are valid.

The MINES for Libraries™ survey is mandatory for respondents, and based on usage or uses, not on users. One means of reducing the inconvenience to patrons of repeated surveys is to auto-populate the survey with the previous values, so that every time the survey is presented, the patron can simply click through, if none of the answers have changed. This methodology worked well for several years, passing numerous university Institutional Review Board (IRB) reviews, but patrons and faculty have become more sensitive to their options as web-based marketing has increased. In some sense, libraries are guilty by association as they follow the lead of web marketing firms and survey the patrons repeatedly. Therefore, the next iteration of MINES will record the values chosen in the initial survey of a patron's usage of electronic resources, and will invisibly (to the patron) submit those values again for subsequent use of any networked electronic resource during the sample period. Users' demographics do not change during a session, and an examination of the MINES data collected to date shows that repeat users rarely change their purpose of use. At workstations where there is more than one patron, such as public workstations in a library, a timeout mechanism will be implemented.

MINES has followed the web survey design guidelines recommended by Dillman (2000), which suggested fourteen principles for the design of web surveys to mitigate the traditional sources of web survey error: sampling, coverage, measurement and non-response. To reduce the effects on the respondents of different renderings of the survey by different workstation browsers, the survey uses simple text for its questions. The survey is short, with only a few questions, easy to navigate, and plain. Questions are presented consistently, that is, with either radio buttons or drop down menus. A short paragraph explains the purpose of the survey, with IRB contact information, if required.

The MINES methodology also recommends a library web architecture or a gateway in order to be certain that all respondents in the sample period are surveyed, and that web pages other than the library website, bookmarks, short cuts, and other links all go through a central point.

This library web architecture is called the infrastructure of assessment.

An Infrastructure of Assessment

The importance of a library gateway through which patron access is provided to networked electronic resources (sometimes called a click-through mechanism) has been pointed out by a number of authors (e.g., Shim and McClure, 2002; Bertot and Davis; 2004; and Antelman, 2002). Often the gateway discussion is framed in the context of log files and counters. A number of libraries have instituted click-through arrangements to generate consistent counter methods for comparing database use and identifying trends and patterns. (e.g., Samson, Derry and Eggleston, 2004; Van Epps, 2001; Duy and Vaughan, 2003). The fundamental problem with gateways collecting log file or transaction log data is that the data are not very rich. It is usually proxy server protocol or HTTP/TCPIP protocol data. Vendor data is much more informative, although inconsistent.

Franklin and Plum (2002, 2004) have shown the importance of the gateway architecture or an infrastructure of assessment for web surveys, where much richer usage data can be collected by asking simple questions. The infrastructure of the gateway itself can be comprised of scripts, OpenURL servers, database-to-web architectures such as ColdFusion or php-MySQL, a referral server, a re-writing proxy server, or any other mechanism that the library can implement which assures that all requests by patrons for network services and resources go through a central gateway at which point the survey can be inserted.

An example of the infrastructure of assessment is the following diagram of a university library web architecture. Note that there are three client groups, defined by:

1. location: in the library;
2. on campus but not in the library; and
3. off-campus.

In this diagram, the rewriting proxy server at the top, or the database-to-web solutions at the bottom of the diagram, the A-Z serials list (e.g., Serials Solutions) or possibly the OpenURL server in the upper right of the diagram could all serve as possible gateways or web survey intersection points. The patron would request a

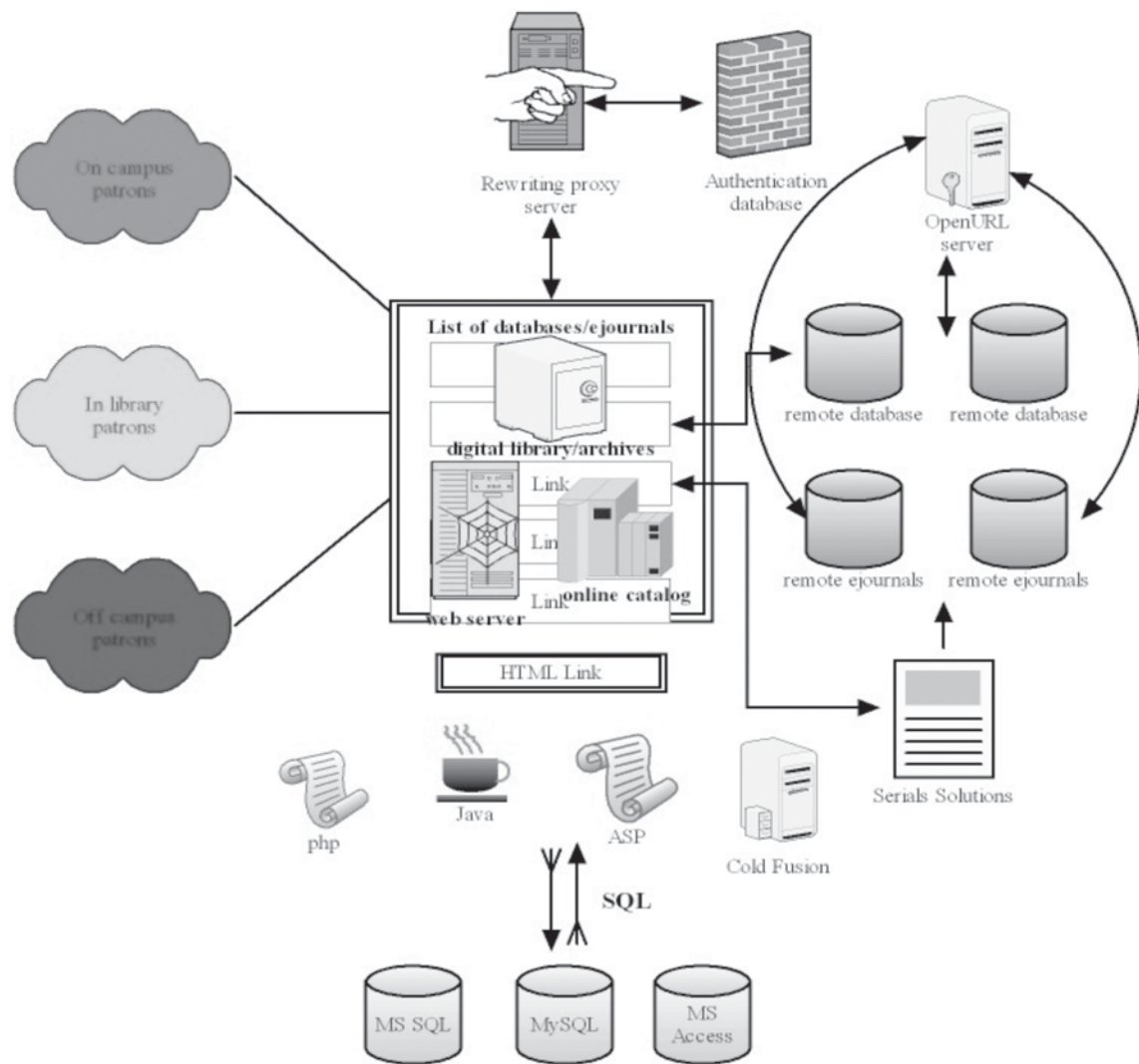


Figure 1. Example of an assessment infrastructure.

remote database, ejournals, online catalog or other resource, and would be presented with the web survey, served by the gateway. There might also be a referrer server to which all requests that went through the proxy re-writer, the A-Z serials list, and other gateways were sent.

The imposition of a web-based survey at the gateway mitigates the effect of technological change on the vendor side. Information providers will constantly be changing their technology and their offerings. The infrastructure of assessment or middle layer assessment metrics will protect the survey from unannounced architectural or technological changes at the information provider.

In an infrastructure of assessment the library can define for itself what its networked services are rather than relying solely on vendor data.

To be tied primarily or even exclusively to publishers for output data in this tumultuous period for scholarly communication is not a wise choice. Libraries are of course free to push the vendor supplied data as far as it will go, but by creating a gateway, free Internet resources with some sort of value-added information, arrangement, marketing or access, could be folded into the library's suite of networked electronic resources and therefore evaluated for impact, etc.

For example, the Open URL server could incorporate Google Scholar into its list of services. It could add value to Google Scholar by customizing some of its options for its patrons. Then patrons might be tempted to go through the Open URL server instead of going directly to Google Scholar, creating usage for a library enhanced networked electronic resource.

Open Access and the Non-utility of Vendor Supplied Data

What is a networked electronic resource? Many academic and public libraries enthusiastically created subject or liaison web-based lists for their patrons, mixing and indexing free Internet resources along with subscription resources paid for by the library. In academic libraries the inclusion of the free Internet resources is justified because of their scholarly quality and importance to teaching or research. In public libraries, the free sources are included because of their quality and relevance to the community. Despite drawing the patron's attention to both types of resources, the library and librarians usually did not take the same level of responsibility for free Internet resources. Free resources are almost regarded as found objects. It is good fortune that they exist, and even better fortune that the librarians could find them and, if not make them available, at least recommend them to their patrons. The library might even add value to the presentation of these found objects of databases and ejournals by providing annotations, subject terms, etc., even though the free sources may change their URL address, may die altogether, or may degrade in quality as the originators move on to other projects.

The ISO standards for the electronic collection (ISO 2789, sec.3.2.1) include ebooks, electronic databases, ejournals, and digital documents. ISO breaks out free Internet resources to be counted separately, but focuses on the free resources cataloged in the OPAC, presumably government documents. (Bertot and Davis, 2004). The National Information Standards Organization (NISO Z39.7, sec.4.10) defines the electronic collection as electronic databases, ejournals and digital documents. It also recommends counting separately the free Internet resources in the catalog. EQUINOX excluded free Internet resources by describing electronic materials as "documents held locally and documents on remote resources for which access rights have been acquired at least for a certain period of time." (Bertot and Davis, 2004).

In the definitions of networked electronic resources created by the standards-setting bodies, free Internet resources are typically excluded or counted separately, usually because cost or expense is an important part of the metric. However, in the lists and services that academic and public libraries present to the

public, free Internet resources often are included. Usage of free resources may be as important to the library to measure as it was to highlight for the patron, but vendor-supplied statistics will not help. Therefore, as important as ICOLC and Project COUNTER have been to encouraging vendors to supply consistent and commensurable data, the importance of these data could diminish in the coming years, particularly if open access and free web resources increase in significance.

There are four other drivers, in addition to the libraries' incorporating free resources into their electronic resources mix for patrons, which argue for the growing non-utility of vendor-supplied data:

1. digital libraries
2. pre-print and post-print servers
3. open access journals
4. open access repositories such as institutional repositories

It is paradoxical that just as the measures are becoming accepted and widely used, their limitations become more apparent, primarily because of the rapid changes in scholarly communication. These other collections push the definition of scholarly resources into new directions and new environments. For the academic library, all are viable alternatives to subscription vendors, both for the library and for their patrons.

1. Digital Libraries

In the ARL E-Metrics test questions, the use of the library digital collection is a separate question from the use of networked electronic resources. Digital libraries usually represent local resources brought up by the library as part of a digitization project. In a MINES study of one university library conducted in 2005 which elected to make available and market extensive digital libraries collections, we find that as much as 40 percent of the usage of the library resources is from patrons not associated with the university, almost all from off campus. This group would not be able to use the IP-limited, vendor-supplied resources, but is making extensive use of local digital library resources, typically comprised of scholarly materials. If 40 percent of the usage of a university libraries' networked electronic resources is taking place outside of the vendor-supplied databases, the necessity for capturing this data becomes evident.

2. Pre-print and Post-print Servers

There has been a proliferation of pre-print servers or gray literature. The technology of the web has enabled a number of pre-print servers to make technical reports, working papers, business documents, and conference proceedings available to all, even those not in the knowledge flow for a particular subspecialty. In the spirit of open access to pre-peer reviewed publications, these papers are indexed, abstracted, and are available full text within such pre-print environments as arXiv.org e-Print Archive (<http://www.arxiv.org>), RePEc – Research Papers in Economics, (<http://www.repec.org>) and SSRN – Social Science Research Network, (<http://www.ssrn.com/>). To date the accumulation of pre-print servers does not seem to have affected the transmission of scholarly knowledge through journals, but has remained an added-value service for scholars and students, especially for those who would not have otherwise had access to the network of collegial distribution. The contents of these services and their usage are enormous.

3. Open Access Journals

A second response has been proposals for open access journals. Peter Suber, in a discussion of open access definitions in the *SPARC Open Access Newsletter*, #64, defines open access literature as online, free of charge, and free of most copyright, licensing and permissions restrictions. Open access journals have a number of possible models, most of which are described in the Open Society Institute's *Guide to Business Planning for Launching a New Open Access Journal*. The methods include author submission or publication charges, article processing fees, offprint sales, advertising, sponsorships, journal publication in off-line media, electronic marketplace, dues surcharge, grants and contributions, and partnerships. Many of these models depend upon the university or grant funding organizations, the author-pays model the most obvious example. Open access journals are not incorporated into vendor packages and do not offer similar vendor supplied data. Open access journals will strive to keep down costs, and will not be able to follow ICOLC or Project COUNTER recommendations for metrics because they do not have subscription relationships with their clients. The *Directory of Open Access Journals* (<http://www.doaj.org>) lists over 1500 journals available to the patrons of libraries.

4. Institutional Repositories

Lynch (2003) describes the development of institutional repositories through which libraries can assume a much more active role in scholarly communication and also leverage alliances on campus. "A university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members."

The services it offers are stewardship, organization, access and distribution. It is also committed to digital preservation, including format migration. Although Lynch takes pains to distinguish scholarly communication from scholarly publishing, and specifically makes the point that the institutional repository is not a journal and should not be managed like one, the institutional repository will change the role of the library. These institutional repositories will include both pre-prints and post-prints.

The contents of all four of these open repositories – the digital library, pre-print discipline repositories, open access journals, and university institutional repositories – could be made harvestable by Open Access Initiative Protocol for Metadata Harvesting (OAI-PMH) and OpenURL search engines. Google Scholar (<http://scholar.google.com>) is just the beginning of searchable access to free scholarly content. It will become increasingly effective as these repositories become richer in scholarly materials, and as OpenURL and OAI-PMH standards are increasingly adopted so that these materials can be found.

ICOLC, in their revised *Guidelines for Statistical Measures of Usage of Web-Based Information Resources* (updated December 2001) state that "The use of licensed electronic information resources will continue to expand and in some cases become the sole or dominant means of access to content." With the popularity of adding links to free materials to library web pages, digital libraries, pre-print discipline repositories, open access journals, and institutional repositories, this statement is probably outdated. Although journals titles have in fact increased, it is very likely that licensed electronic information resources will not become the sole or dominant means of access to content for libraries, but will be one means of access in a suite of scholarly offerings.

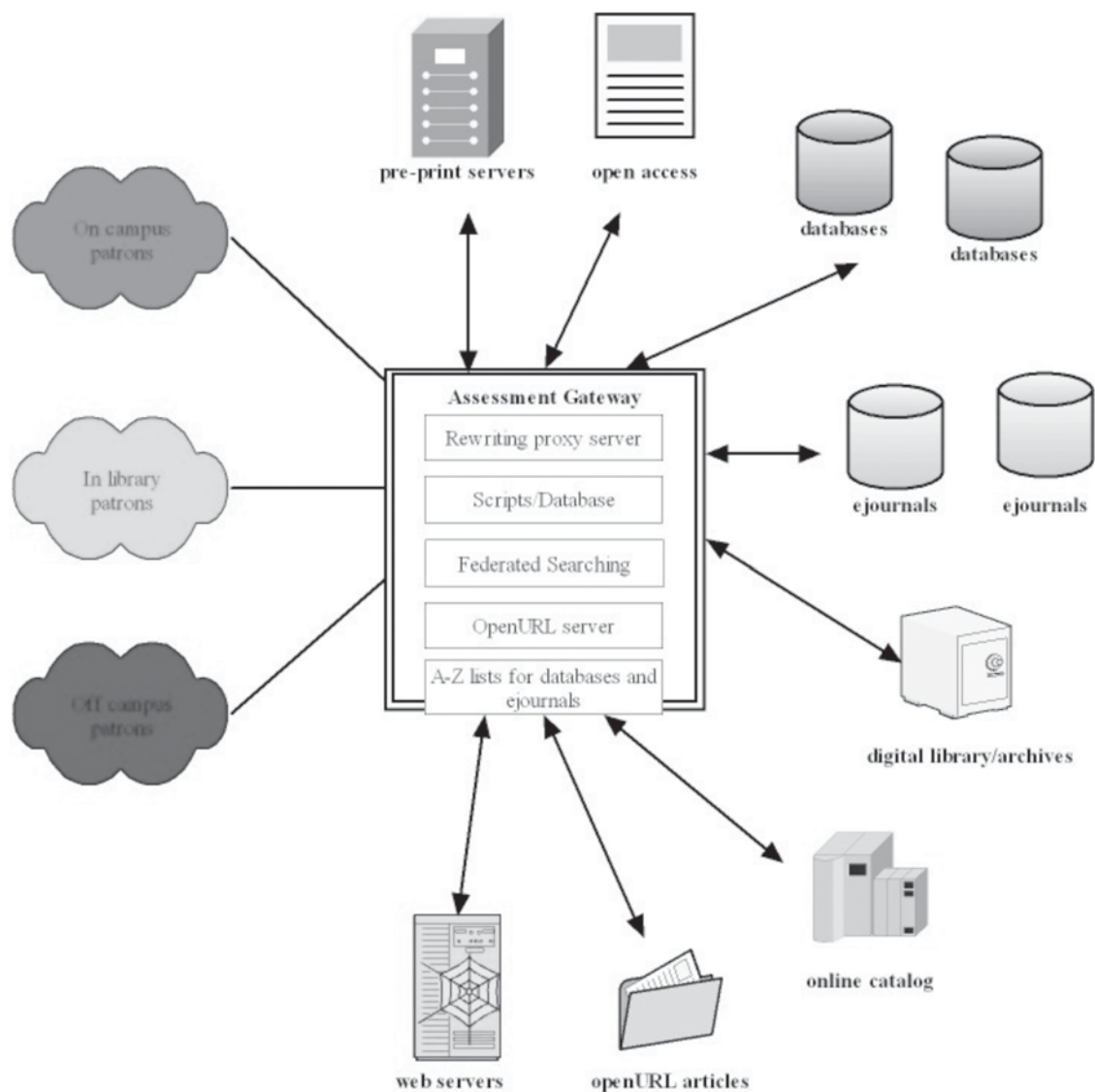


Figure 2. The assessment gateway.

Assessment Gateway

Building on the infrastructure of assessment is the assessment gateway.

Most of the existing gateways for library resources exist not for assessment purposes, but to solve other problems. Rewriting proxy servers provide off-site access for electronic resources, and incidentally serve as a gateway through which all patrons must pass. XHTML databases and ejournal alphabetical and subject lists are created by scripts and databases or XML to solve the problem of updating XHTML and to increase consistency across the web site. OpenURL servers link journal articles through DOIs to citations in databases to leverage the availability of the ejournals, to reduce the cost/use by increasing use, and to offer a powerful access tool.

Yet, with an assessment infrastructure, the library web architecture could be planned to include the collection of counter and web survey data. Such data would be consistent, not only across disparate databases, but also across disparate services, such as the varied components of digital libraries. An assessment infrastructure would run all patron requests for ejournals and for local digital collections through the same gateway, collecting commensurable data. It could also reach across digital formats, providing data for movies, sound files, graphics, office applications, as well as text or Acrobat files. The library would highlight the digital libraries, pre-print servers, open access journals, institutional repositories, and other databases and ejournals containing freely searchable and downloadable material. As patrons used the library's links to these sources, the usage would be captured in the assessment gateway. Relationships would build up, not only

between the libraries and information providers, as has been the case with the standards-setting institutions, but also between libraries and the various open services.

MINES for Libraries™ is a web-based survey, building on local infrastructures of assessment, that can be used to query all types of networked electronic services offered by a library. It has been employed at more than 30 North American libraries in the last two years and offers libraries local flexibility in the types of questions asked and the types of local outcomes to be measured.

MINES Results from Academic Health Sciences Libraries in the United States

Seven academic health sciences in the United States implemented the MINES methodology between January 2003 and April 2005 as part of a larger, more comprehensive library cost analysis study. The specific purpose for the MINES web survey was to determine the extent of usage of networked electronic resources for supporting sponsored research activities. More than 27,000 uses of networked electronic services, including databases, indexes, online public access catalogs, electronic journals, electronic document delivery and interlibrary loan, and electronic books were surveyed. Some of the studies are in progress; some represent a complete year's sampling of usage. Data are still being collected and new libraries are participating in the survey process each year. To date, approximately 33 percent of the networked electronic services uses at these academic health sciences libraries were related to sponsored research projects; 37 percent were related to instruction, education, and unfunded research.

As Table 1 demonstrates, sponsored researchers at these seven health sciences libraries used networked electronic services most frequently from on-campus, but not from within the library. Approximately 93 percent (8,525 of 9,155) of sponsored research use took place on-campus (including in the library). While 24 percent of all networked resource use occurred within the library; only 17 percent of funded research use of networked resources actually took place in the library (1,566 of 9,155).

At these academic health sciences libraries, the classifications of networked electronic services users varied significantly based on their location (see Table 2). Within the library, faculty and staff usage represented about 46 percent of total use and graduate student usage accounted for about 31 percent of use. On-campus, but not in the library, faculty and staff represented 53 percent of all usage, clinical and other users accounted for about 26 percent of the usage, and graduate students totaled about 20 percent of the usage. Off campus, faculty and staff accounted for about 48 percent of networked electronic services usage; clinical/other users and graduate students each represented about 25 percent of off-campus networked electronic services usage.

MINES Results from Academic Main Campus Libraries in the United States

At the seven main campus libraries, sponsored research use represented 11 percent of total electronic services use, as compared to the 33 percent sponsored research use found in academic health sciences libraries. Approximately 84 percent (2,502 of 2,971) of the sponsored research uses of networked electronic

Location	Purpose of use									
	Funded research		Instruction		Patient care		Other activities		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
In the library	1,566	24	2,651	40	567	9	1,806	27	6,590	100
On-campus, not in the library	6,959	44	5,065	32	2,236	14	1,688	10	15,948	100
Off-campus	630	13	2,405	50	884	18	933	19	4,852	100
Total	9,155	33	10,121	37	3,687	13	4,427	17	27,390	100

Table 1. Purpose of use by location, academic health sciences libraries. Totals for seven libraries.

Location	Users									
	Undergraduates		Graduates		Faculty/staff		Other users		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
In the library	417	6	2,142	31	3,110	46	1,150	17	6,819	100
On-campus, not in the library	291	1	3,823	20	10,399	53	5,069	26	19,582	100
Off-campus	263	5	1,853	34	1,770	32	1,596	29	5,482	100
Total	971	3	7,818	25	15,279	48	7,815	24	31,883	100

Table 2. Classification of users by location, academic health sciences libraries. Totals for seven libraries.

resources occurred outside the library, (as compared to 93 percent for academic health sciences libraries), while 64 percent of all electronic services use took place outside the library (as compared to 76 percent for academic health sciences libraries) (see Table 3).

At the main campus libraries, there were about 1.8 networked resources uses outside the library for each use inside the library. The difference was even more pronounced at academic health sciences libraries, where there were roughly 3 networked resources uses outside the library for each use inside the library.

At the main campus libraries, inside the library, undergraduate student use of networked electronic resources was heavy, representing 43 percent of all in-house use. On-campus, but not in the library, graduate student usage was heaviest (40 percent) followed by faculty/staff (31 percent) and undergraduate students (25

percent). Off-campus use of networked electronic resources was heaviest by other users (40 percent), primarily those users not affiliated with the university offering the resources (see Table 4).

MINES Results from the Ontario Council of University Libraries in Canada

Canadian Libraries are heavily engaged in jointly licensing networked electronic resources through consortium purchases. Canadian libraries have access to a number of electronic resources through the Canadian National Site Licensing Project as well as through local consortial purchases.

The Ontario Council of Libraries (OCUL) launched its Scholar's Portal in 2001 as the major component of its Ontario Information

Location	Purpose of use									
	Funded research		Instruction		Other sponsored activities		Other		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
In the library	469	5	6,407	66	280	3	2,577	26	9,733	100
On-campus, not in the library	2,005	21	5,925	63	151	2	1,379	14	9,460	100
Off-campus	497	6	4,510	58	132	2	2,651	34	7,790	100
Total	2,971	11	16,842	62	563	2	6,607	25	26,983	100

Table 3. Purpose of use by location, academic main libraries. Totals for seven libraries.

Location	Users									
	Undergraduates		Graduates		Faculty/staff		Other users		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
In the library	3,975	43	2,196	24	2,276	25	725	8	9,172	100
On-campus, not in the library	2,248	25	3,525	40	2,772	31	293	4	8,838	100
Off-campus	1,580	21	2,152	28	871	11	3,085	40	7,688	100
Total	7,803	30	7,873	31	5,919	23	4,103	16	25,698	100

Table 4. Classification of users by location, academic main libraries. Totals for seven libraries.

Infrastructure (OII). The Scholar's Portal provides access to networked electronic resources purchased consortially by 20 Ontario universities, known collectively as The Ontario Council of Libraries. OCUL's assessment team partnered with the Association of Research Libraries Statistics and Measurement Program in 2004–2005 on a project to help assess the value of networked electronic services jointly licensed by OCUL. The goals of the project were:

- to capture in-library and remote web usage of the OII Scholars Portal in a sound representative sample using the MINES methodology;
- to identify the demographic differences between in-house library users as compared to remote users by status of user;
- to identify users' purposes for accessing Scholars Portal electronic services (funded research, non-funded research, instruction/education use, student research papers and course work); and
- to develop an OII infrastructure to make studies of patron usage of OCUL networked electronic resources routine, robust and integrated into the decision-making process.

All but one OCUL member agreed to survey its networked resources users using the MINES for Libraries™ methodology. OCUL-licensed electronic resources are mounted on a central server at the University of Toronto and the user survey was conducted over the course of a year during one randomly scheduled two-hour survey period each month. Because retrospective Scholar's Portal usage totals were available by day of the week and time of day, the probability of a particular day of the week and time of day was weighted accordingly to ensure a representative sample.

More than 20,000 networked electronic resource uses through the Scholar's Portal were sampled between May 2004 and April, 2005. As Table 5 illustrates, the largest component of usage was by undergraduate students (46 percent), followed by graduate/professional students.

More than 80 percent of the Scholar's Portal uses sampled originated from outside OCUL libraries (see Table 6). Off-campus use represented more than 45 percent of all networked electronic resource usage; almost 35 percent originated on-campus, but not in the library.

The purpose of use categories selected by OCUL were slightly different from those selected by US libraries (See Table 7). At the Ontario libraries, roughly 26 percent of all Scholar's Portal use was related to sponsored research. Almost half (47.69 percent) pertained to coursework or teaching.

Classification	No.	%
Faculty	2,261	11.14
Graduate/professional student	6,545	32.24
Library staff	328	1.61
Other	721	3.55
Staff	1,128	5.56
Undergraduate	9,317	45.90
Total	20,300	100.00

Table 5. OCUL Scholars Portal uses, by classification of user.

Location	No.	%
In the library	4,047	19.94
Off-campus	9,163	45.14
On-campus, but not in the library	7,090	34.92
Total	20,300	100.00

Table 6. OCUL Scholars Portal uses, by location.

Purpose of use	No.	%
Coursework	8,537	42.05
Other activities	1,523	7.50
Other research	3,290	16.21
Patient care	487	2.40
Sponsored research	5,318	26.20
Teaching	1,145	5.64
Total	20,300	100.00

Table 7. OCUL Scholars Portal uses, by purpose of use.

Lastly, the academic affiliations of the Scholar’s Portal users sampled in the study were determined. Of the 20,300 Scholar’s Portal uses sampled in 2004–2005, more than 37 percent were from users in the sciences and applied sciences. Sciences and applied sciences users, when combined with health sciences users, totaled almost 60 percent of all Scholar’s Portal uses, while humanities and fine arts user accounted for only about 4 percent of all uses (see Table 8).

Conclusion

The data collected for US academic health sciences libraries shows that grant-funded researchers do grant-related library research for their sponsored projects primarily from the office or lab on campus. There is comparatively little usage from within the library, and even less from off campus. To reach this important client group, it would be reasonable to invest effort into web-based research portals and digital functionality emphasizing research resources, rather than committing resources to the physical library, since this group is not coming

Affiliation	No.	%
Applied sciences	2,930	14.43
Business	814	4.01
Education	881	4.34
Environmental studies	867	4.27
Fine arts	160	0.79
Humanities	600	2.96
Law	117	0.58
Medical health	4,391	21.63
Other	948	4.67
Sciences	4,698	23.14
Social sciences	3,894	19.18
Total	20,300	100.00

Table 8. OCUL Scholars Portal uses, by affiliation.

to the library to search the literature to support their grants. Faculty who search networked electronic resources from off campus are typically looking for information to support instruction, and there are comparatively few of them. In general, usage from off campus seems less than anticipated (17 percent), and when the ‘Other Users’ group is ignored, the percentage of off-campus usage by the primary client group drops even more.

In US academic main libraries, there is less sponsored research searching of networked electronic resources than at health sciences libraries, which is expected. What may be unexpected is that many undergraduates still come to the library to use networked electronic resources. The physical library plays an important role in instruction, even with networked electronic resources. This trend may change over time with more undergraduates accessing resources from outside the library, but surprisingly, at least for undergraduates, going to the physical library is still an attraction, even for using digital resources.

The OCUL data reflects a different environment than either the US academic health sciences libraries or US academic main libraries. Off-campus usage of Scholar’s Portal is much higher than the usage of networked electronic

resources in surveyed US libraries. Undergraduates are the largest group of users, yet sponsored research use is high. Use of science and medical journals is also high, which is probably related to the choice of ejournal publishers included in the Scholar's Portal offerings. Scholar's Portal does not represent the totality of an OCUL member library's networked electronic offerings to its clients, so it cannot be meaningfully compared to surveyed US libraries. However, it is an excellent example of a closed system of digital resources, and the survey data collected about its usage will contribute to its assessment.

Web surveys create opportunities to assess the characteristics of types of networked electronic information usage in real-time, including open access materials or freely available web resources that are utilized by faculty and students in an academic environment. These results can be used to complement vendor-supplied data to inform collection development decisions. Web-based surveys of the usage of networked services can be more comprehensive when a library adopts an infrastructure of assessment, or a gateway architecture, to networked electronic services.

The MINES for Libraries™ methodology permits librarians to gauge the demographic characteristics of users, their location, the date and time of use, the specific resource used, and their purpose of use as they actually utilize an electronic resource. Other usage measures are also possible, and results can be presented either as frequencies (illustrated in this paper by OCUL results) or by cross-tabulating different measures (such as location and either purpose of use or classifications of users, as illustrated in this paper by results from US libraries).

The MINES for Libraries™ methodology is already being used by American libraries to determine to what extent electronic resources of all kinds support sponsored research, instruction, and other key academic endeavors. It has been employed by a Canadian consortium of libraries to assess the value of jointly licensed electronic products to its broad range of constituents. The methodology also permits a library to analyze, resource by resource, electronic services' usefulness to different constituencies and different institutional missions. These data can give librarians insight into how, by whom and why their electronic resources are being used.

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From Bibliographer to Curator: archival strategies for capturing web publications

GladysAnn Wells and
Richard Pearce-Moses



About the authors: page 47

Abstract

Librarians, archivists, and records managers can no longer be passive recipients of what they have received through often venerable programs, but must actively capture the information needed in the future. Given the quantity of material on government agency websites, traditional, item-level methods for bibliographic control is impractical. An Arizona Model for curating a collection of web publications based on the archival principles of provenance and original order grew out of the observation that the organization of websites parallels the organization of archival collections. The Arizona Model addresses traditional library functions of identification and selection, acquisition, description, reference, and access. It proposes how an archivist's perspective can help adapt those functions to the needs of the 21st century.

Keywords: Web publications; Archives; Libraries; Records management

Introduction

In English common-law countries, especially the United States, a covenant exists between the governed and those who govern. That covenant affords citizens legal, judicial, and operational protection and predictability. Citizens expect government to document its actions, defend them, and protect their rights and entitlements. Librarians, archivists, and records managers play an important role in this relationship. They must work with document creators to ensure that the products of governmental business processes are identified and preserved so that they can build a collection of the authentic¹ and authoritative² documents and records that allow citizens to hold government accountable and to ensure the legal context within which they work, live, and build their communities.

The rapid rise of e-government and the shift from paper to digital documents has an enormous impact on the library, archives, and records professions. Unless the professions can adapt – as rapidly as the technological environment changes – their role in this covenant will be compromised, and citizens may not have the information they need to protect their rights and interests, nor will government be empowered to maintain its role within the covenant – or defend its actions.

In the 21st century, born-digital information does not come in the precise packages with which we were familiar. We must adapt our practices, standards, and services within this new environment. But in order to succeed, those changes must be based on a new understanding of how we *curate* a collection of government information, not just serve as its bibliographer. While *what* we do remains the same, *how* we do that is changing. We can no longer be passive recipients of what we have received through often venerable programs, but must actively capture the information we know will be needed in the future.

I use the word *curate* to refer to a wide range of activities that all cultural professions share: identification and selection, acquisition, description, reference, and preservation.

The Context of Our Work

In 2002 Nancy Bolt presented my paper ‘Needed: Librarians, Archivists, and Records Managers for the Organization, Access, and Preservation of Government Information in the Electronic Era’ to this conference.³ Since then, the pace of change has continued at breakneck speed. In that paper, I opined that technology – and especially born-digital government information – had forced a transformation on the three information professions: librarians, archivists, and records managers. As I said in that paper

I believe to deal effectively in the digital government environment, practitioners must combine skills heretofore practiced separately by archivists, records managers, and librarians. I believe we must fundamentally re-think the previous, now in the digital era almost artificial, differentiation between these skills and build towards new hybrid professionals who can borrow from each of our professions to support the operations of e-government.

The Arizona State Library, Archives and Public Records has increasingly done just this – placing us among the leaders in our professions’ struggle with born-digital government information.

Politics are often concerned with the immediate. Politicians must worry about re-election or re-appointment. Similarly, technology is judged mainly by speed of transaction. Technology experts are expected to focus primarily on today’s production or necessary results. Conversely, the skills of the records, archival, and library communities focus not only on today, not only on a set of interactions between service provider and service recipient, but also on the documentation that will prevent a repeat of mistakes made yesterday and provide for a future that will last longer than tomorrow.⁴ We must believe in the value we bring to the table in the digital age. We must embrace the digital age of government content and develop the expertise that ensures the evolution of our disciplines as practitioners in the government world.⁵ Our historic and current contributions – authenticity,

authority, and respect for past practices balanced with current usability – are critical in the electronic information era.

We possess the ability to work with all parties and to participate in all types of forums; to be knowledge navigators (the finders of electronic content) in all types of information brokering (business transactions relating to access to electronic content);⁶ to establish standards that are used across multiple fields of endeavor; and to teach practitioners and recipients (or users) how to access materials and services. I believe unless the three disciplines (library, archives, and records) work together, collaborate with technology professions, and educate political leaders, the information we require to provide our services, do our work, run our governments, or live our lives, will be lost by accident or design.⁷

It Is Our Job

A fundamental tenet of the work we have done in Arizona, through our three professions, has led to what is now called the Arizona Model. The Arizona Model, which will be discussed later in this paper, recognizes that our success cannot be predicated on someone outside our own organization. We cannot expect webmasters (or others) to send us documents, to remember our job when they are caught up doing their own. We cannot expect them to embed metadata to empower us to serve users they may never meet or report to in any real time manner. We cannot hope for them to provide us unfettered access to their systems. If they do any of these things, all for the better; but we will not presume that we will get their cooperation. In a nutshell, we cannot discipline someone who is not doing something if they do not work for us. And, in reality, it is not their job; it is our job. But we can empower them through education and patience to be our partners or at least keep them from being even our passive adversaries.

Long-term preservation must be a part of document creation. While technology offers the promise of information available 24/7, that access will become never/forever if we do not take steps to counter rapid hardware and software obsolescence. Records managers and archivists teach us about the lifecycle of information – what must be kept and what should not, need not be kept. Technology can also help us protect and preserve these materials. As Dr. Robert Martin, head of the Institute for Museum and Library Services, notes, “If we are to get

control over digital records, we need to assure that the information systems are developed to address the needs of records systems. The technology provides ample opportunity to manage digital records easily, if we only build the capacity into the systems from the ground up, rather than chasing it after the fact.” Dr. Martin further notes that in the mid-1990s, Paul Evan Peters, founder of the Coalition for Networked Information, urged us to stop standing under the torrent of materials pouring out of the pipeline and trying to sort them out. Instead we need to get up at the top of the pipeline and sort them as they go into it.⁸

We must come to an understanding and acceptance that digital production of information has swamped our capacities to keep everything – even if that were desirable. We must work with all levels of government, bring all skills sets to the table to carefully pick our battles around those items and types of material that must be kept – for the protection and longevity of the covenant – for government to continue to function.

Even as technology has created new, acute expectations and challenges, it has also given us new tools . . . and the capacity to work to develop newer ones for our own skill set needs and practices. Technology allows us to do things that were impractical or impossible just a few years ago. We cannot think of technology as magic. It cannot do everything. We must understand how we can combine the power of technology with human judgment. How do we build systems that take advantage of the speed and power of computers to support human decision-making? New tools that are truly effective and efficient are essential to help us work in an environment of reduced budgets. Technology blurs the distinctions between different types of materials. In particular, we must understand the difference between information and records. Records contain information. But more important, records fix information in a form that is authentic and reliable. We must be able to prove that the records are genuine and without fraud and that we can trust them as accurate accounts of the past – of actions and transactions. Authenticity and reliability are essential to appraisal – the process by which we must decide what is essential to keep and for how long – the lifecycle of information defined through the fixity of records within the context of provenance (where an information set came from, when it was originated, and who worked on it).

As Dr. Martin observed, “While all records systems are information systems, all information systems are not records systems. Records systems require that context and structure be managed as well as content. Information systems usually only manage content.”⁹

One of our profession’s most embarrassing failures has been our reluctance to rethink how we do things. When we have adopted technology, we did not always pursue business process reengineering. We focused on how technology could help us do the same thing faster, not how it could help us do new things better. For example, when we automated the card catalog we merely put it on technologically-provided wheels, and only later began to investigate new ways to search and display the entries.

The information professions must become even more flexible and adaptable. We are comfortable with well-established standards that evolve slowly. The standard for MARC format (Z39.2) was first issued in 1971.¹⁰ Since then it has become a pervasive technology to support storage, transfer, and retrieval of bibliographic information. But this venerable standard reflects data processing practices of its time. It has lost its monopoly. We now consider other data architectures, such as Dublin Core, Encoded ArchivalDescription,¹¹ VRA Core,¹² and others yet to be designed.

Arizona Efforts to Curate Collections of Digital Government Information

The Arizona State Library and Archives is involved in several projects to transform bibliographic work to curation of the state documents depository program. Our efforts reflect a cross-disciplinary approach that draws on practices from libraries, archives, and records management enabled by technology capable of operating within the political context and needs of the covenant.

In Arizona, the state’s library, archives, and records management programs are in the same agency. We have worked hard to build a team approach to addressing the problems of moving from the world of paper to the world of electrons. We have pooled the insights and expertise of the professions to find novel approaches to traditional practices. Because of our collaborative environment, we were able to see how archival principles of aggregate control could be

adapted to curating a collection of state documents published on the web.

The web has been a great boon to citizen access to government information. The web has significantly reduced the cost of publishing information. State agencies can now afford to distribute many more documents than was economically possible in print. As a result, the number of state documents has exploded. At any given time state agency websites hold more than 400,000 documents on more than 150 web servers.

Web SafetyNet

Our first project was in collaboration with the Illinois State Library (ISL). Several state libraries agreed to test software to capture state agency websites. The software was developed for ISL by the University of Illinois at Urbana-Champaign under a US Institute of Museum and Libraries Services (IMLS) grant.

This software takes a techno-centric, brute-force approach to the problem of curating a collection of state web publications. It uses little human judgment in selecting materials, and captures as much as is technologically possible. The software stores the documents in a compressed format that saves significant amount of disk space, but prevents the documents from being easily accessible. The Library has the documents, should someone need them. However, because Google and other search engines cannot find the pages, the public generally is unaware of them and will not ask for them. The task of finding them remains with the traditional professionals' understanding of what they have – it's just electrons, not paper.

For more information on this project, see <http://www.isrl.uiuc.edu/pep/>.

The Arizona Model for Web Preservation and Access

Given that quantity of material on agency websites, traditional, item-level methods for bibliographic control were impractical. Based on our observation that the organization of websites parallels the organization of archival collections, we developed a model for curating a collection of web publications based on the archival principles of provenance and original order.¹³

The Arizona Model addresses traditional library functions of identification and selection,

acquisition, description, reference, and access. However, it looks at those functions through the eyes of an archivist. As I said earlier, *what* we do remains the same, but *how* we do those things is changing. The Arizona Model articulates a different way of accomplishing those things. Archivists focus on aggregates, not items. The two principal groupings are collections (based on provenance¹⁴) and series¹⁵ (based on the original order used by the creator). An archival collection – one based on provenance – includes materials created or received by an individual or an organization.

In general each agency has its own website, and because all the documents share the same provenance, the Arizona Model treats each website as an archival collection. While collections based on provenance may seem like a coarse sieve, it is surprisingly effective. When browsing a list of collections for information on water pollution, a patron will more likely look at Environmental Quality or Water Resources before they look at Child Protective Services.¹⁶ Managing 150 collections (websites) is much more realistic than managing 400,000 documents. Provenance also supports the authenticity and authority of a particular document. We know where it came from and who is responsible for it (or at least gives it imprimatur by putting it on their website).

Each website organizes similar documents into directories, and the Arizona Model treats each directory as a series. Rather than sorting individual documents into standard categories established by the library (classification), archivists respect original order by keeping the documents in the series established by the creator. Original order makes it possible to refine searches within a large collection based on the characteristics the creator used to organize the documents. For example, someone looking on the Department of Water Resources' website for information on drought would check the series for the Governor's Drought Task Force and ignore irrelevant series, such as those for pollution.

Work priority and processes take advantage of these groups. Websites are ranked in terms of their relative importance using the archival theory of macro appraisal. The most energy is placed on the most important sites. Documents are selected at the series level, rather than the item level. For example, reviewing the series (directories) on a website, it becomes apparent that a directory containing blank forms can be

ignored, while a series (directory) containing reports must be looked at more carefully.

More information on the Arizona Model can be found at <http://www.lib.az.us/DigitalGovt/AzModel/AzModel.pdf>.

University of Illinois/OCLC ECHO DEPOSITORY Research Project

The Arizona Model is a major component of a research project developed by the University of Illinois at Urbana-Champaign and OCLC. The ECHO DEPOSITORY research project (Exploring Collaborations to Harness Objects in a Digital Environment for Preservation) is being funded by the Library of Congress through a grant under the National Digital Information Infrastructure and Preservation Program (NDIIPP). The project partners include the Library and the Graduate School of Library and Information Science at the University of Illinois at Urbana Champaign, OCLC, the Arizona State Library and Archives, the Connecticut State Library, the Illinois State Library, the North Carolina State Library, the Wisconsin State Library, the Tufts University Perseus Project, and the Michigan State University Library.

The ECHO DEPOSITORY Project is developing software tools to support an archival approach to curating a collection of digital state documents. The tools are intended to harness the power of computers to analyze the enormous amount of information on the web and present it in a way that supports the work of individuals who use human judgment to curate the collection. For example, people describe groups of documents, and search engines do full text searches to find particular documents within the relevant groups.

Cost Recovery Legislation (HB2187, 47 Leg. 1st R, Ch. 151, Laws of 2005) – A Related Result

Currently, agencies are required to send the State Library a copy of each public report and publication. Compliance with that law is limited because the state documents depository program is not high on their list of priorities. During the last legislative session the Library was given a tool to help increase compliance. The Legislature, understanding that costs saved by reducing printing had been transferred to the Library, passed a law that authorizes the Library to charge state agencies for the costs of acquiring, describ-

ing and preserving documents. Therefore, this new chapter authorizes the Library to charge state agencies for the costs of acquiring, describing, and preserving documents. In the process of developing this legislation, the Library had to address two important issues.

First, what constitutes public reports and publications? Before the advent of the web, it was fairly clear what those terms meant. The manner of production distinguished them from records and internal documents that are inappropriate for the state documents depository program. Because the web has significantly reduced the costs of publication, agencies are putting more and more information on the web. As a result, the act of public dissemination is no longer an appropriate measure of what we want. Public access and publication have been conjoined. We had to develop criteria that clarified – both for the agencies and our staff – the kinds of information we wanted for the depository program. See Appendix A for the criteria.

Second, the Library had to plan for success. The Library asked for at least one paper and one digital copy of each publication. The paper copy serves primarily as an insurance policy; we know we can manage and preserve paper over time using traditional skill sets. The digital copy has become the master and is invaluable for providing the kind of 24/7, online access that people expect. As a result, we have had to establish a technological framework to manage and store these electronic documents. We acquired CONTENTdm software and a robust file server to help us manage the documents at the bit level. We have also had to develop standards, policies, and procedures for digital publications. Currently, we are requesting that agencies submit the electronic copy in Adobe Acrobat (PDF) format. The policies, currently under development, are intended to ensure the authenticity and reliability of these documents.

Conclusion

We cannot merely tweak our current activities. We must continue to identify and select materials, acquire them, describe them, provide access to and reference service supporting the materials, and preserve them. But, we must think about these activities at a more abstract level and, for the long term, in a significantly different way. That is why throughout this paper I have used the word *curate* to emphasize the changing

nature of our work and the similarity among related professions.

To build truly valuable collections that support the covenant between the government and the governed, we must shift our focus from the materials to the context in which the materials are created and the ways in which they will be used. For example, effective cataloging can no longer be measured first or primarily by adherence to rules and items cataloged. Rather, we must return to its original purpose – to ensure that our patrons have access to and can find the information they need, when they need it, and in a form they can use. We must not focus on just the collections but must include the creator as well as the users of born digital information in our solutions.

Appendix A: Requirement to Deposit Public Reports and Publications

Collections Criteria

Since it was founded in 1864, the State Library has collected and made permanently available to the public official reports and publications for the collective memory of the state and its citizens, so that they have information about public policies and programs – past and present – and to promote government accountability.

To support this program, Arizona law requires all officers and agents of state and local government, including agencies, boards, and commissions, ('agencies') to deposit with the State Library copies of all public reports and publications (ARS 35–103, ARS 41–1335 (B), ARS 41–1338 (2), and ARS 41–4153).

These reports and publications include works, whether in print or electronic formats, that are published, disclosed, or distributed to the general public (or a targeted audience within the general public); and also at least one of the following

- that are required by law as a public report; *or*
- that are required by law to be sent to the Governor, President of the Senate, or Speaker of the House; *or*
- that describe an agency's activities, programs, or policies, including annual reports; *or*
- that are the results of a formal study or investigation.

Shortly after distribution or publication, agencies

shall send at least one print copy and one electronic copy (in Adobe PDF) of all public reports and publications to the State Library at no charge. Copies of reports and publications shall include a title page for each document that includes the agency name, title, and date and place of printing or publication. As appropriate, the title page shall also indicate authors, individuals, or organizations that assisted in the production of the report, and any citation to the statute or regulation requiring the report.

This requirement does not include non-public documents, including materials of a confidential nature or materials intended for use primarily within the agency, such as correspondence, forms, interoffice memos, or other materials produced for internal administrative or operational purposes. Non-public documents and agency copies of public reports and publications should be managed according to records retention schedules, which may specify some materials to be transferred to the State Archives at some future date.

Notes and References

1. Authentic documents are genuine, not a counterfeit, and free from tampering. Authenticity is typically inferred from internal and external evidence, including physical characteristics, structure, content, and context. They are perceived as genuine, rather than as counterfeit or specious; *bona fide*. Definition based on Richard Pearce-Moses, *A Glossary of Archival and Records Terminology* (Society of American Archivists, 2005). Available online at <http://www.archivists.org/glossary/>.
2. Authoritative documents are written or published by an official or organization with specific responsibility for the content of the document.
3. Wells, GladysAnn. Needed: Librarians, Archivists, and Records Managers for the Organization, Access, and Preservation of Government Information in the Electronic Era, presented at the IFLA Section on Government Libraries Pre-Conference, 15 August 2002, London. See: http://www.lib.az.us/Wells/IFLA_2002.pdf.
4. Robert Martin. The Role of Libraries in Lifelong Learning (presented at the Five States Indian Conference, 9 May 2002, Mesa, Arizona). Dr. Martin is Director of the Institute of Museum and Library Services.
5. Michael Totherow, personal communication, 10 May 2002. Mr. Totherow was the Director of Computer Services, Office of the Arizona Secretary of State.
6. Nancy Bolt describes the services that United States librarians offer government workers in her paper, *Serving State Government – Librarian Skills, User Education, Services and Support*, presented at the IFLA Section on Government Libraries

Pre-Conference, 15 August 2002, London). Ms. Bolt is the State Librarian of Colorado.

7. Wells, *op. cit.*, p. 2.
8. Robert Martin, personal email, 28 May 2002.
9. *Ibid.*
10. *Information Interchange Format: Z39.2-1994* (Bethesda, Md.: NISO Press, 1994). Available online at <http://www.niso.org/standards/resources/Z39-2.pdf> (checked 21 April 2005).
11. Encoded Archival Description (EAD) is a standard data architecture developed by the Society of American Archivists that is used to create finding aids that describe collections of archival materials. For more information, see <http://www.loc.gov/ead/>.
12. The VRA Core is a standard data architecture developed by the Visual Resources Association that is used "to describe works of visual culture as well as the images that document them." For more information, see <http://www.vraweb.org/vracore3.htm>
13. The discussion of the structure of archival collections and websites that follows is a generalization. Like collections of paper records, the organization of documents on a website varies from site to site. Some collections are well organized, others less so. It will be harder to apply the Arizona Model to poorly organized sites. However, larger sites tend to be better organized because the webmaster needs to be able to manage many more documents.
14. Provenance, sometimes called *fonds*, is "The origin or source of something. . . . Provenance is a fundamental principle of archives, referring to the individual, family, or organization that created or received the items in a collection. The principle of provenance or the respect des fonds dictates that records of different origins (provenance) be kept separate to preserve their context." Richard Pearce-Moses. *A Glossary of Archival and Records Terminology*. (Society of American Archivists, 2005). Available online at <http://www.archivists.org/glossary/>.
15. A series is "A group of similar records that are arranged according to a filing system and that are related as the result of being created, received, or used in the same activity; a file group; a record series." Richard Pearce-Moses. *A Glossary of Archival and Records Terminology*. (Society of American Archivists, 2005). Available online at <http://www.archivists.org/glossary/>.
16. Many times, the relevance of a collection to some subject is immediately apparent from the agency name. However, archives typically develop a list of collections with a note about the creators' functions and the scope of the materials to help when

relevance is less apparent. For example, it may not be apparent that the Corporation Commission regulates the utility industry. In addition to the note, archives may index the list to help patrons easily find the right agency's materials.

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Norwegian Policy for Empowering School Libraries

Elisabeth Tallaksen Rafste, Tove Pemmer Sætre and Ellen Sundt



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Abstract

The first part of this paper presents a general picture of school libraries in Norway, reviewing statistics, outlining legislation on schools and libraries and highlighting aspects of the national curriculum for primary and secondary schools. It illustrates the complex and integrated systems in which school libraries are to be found and looks at obstacles to successfully maintaining and developing school libraries in Norway, bridges to cross and measures to be taken. The second part uses the plan *Make Space for Reading! Norwegian Strategy for Stimulating a Love of Reading and Reading Skills, 2003–2007* (2003, 2005) to illustrate how the political, educational and library systems can join forces to empower school libraries and stimulate reading skills and interest in reading. It examines some of the projects and appraises the input from different parties, the project process and the preliminary results. Finally, it draws attention to future challenges for school libraries in Norway.

Keywords: School libraries; Norway

Introduction

Over the years, Norwegian school libraries have played an important role as lending libraries but a much more minor role as an integrated part of teaching at school. Policy has been drawn up to rectify the situation, and focuses on empowering the libraries. This paper will begin by outlining the status of school libraries in Norway in 2005, focusing on empowerment. In part two, we will present the national strategic plan *Make Space for Reading!* (2003, 2005) This is an interesting example of a government effort to highlight the importance of school libraries in the context of reading.

We must begin by defining the main concept, *empower* – and *empowering* – and relate the definition to school libraries. *The Oxford American Dictionary* defines *empowerment* as ‘to give power to, to make able; to authorize, license’ (*Oxford American Dictionary and Language Guide*, 1999). Using this definition as a starting point, we will examine how present Norwegian policy is directed at enabling school libraries to participate in education through legislation, guidelines, standards and strategies.

Let us take a closer look at the concept of empowerment. Rindom (2002), a Danish researcher on education, claims that traditional empowerment theory builds on humanistic values, and refers to the educational theories of Freire and Habermas. Rindom provides a framework for giving power to individuals or groups who perceive their position in society as being deprived of power and locked into a hierarchical dialogue with an administrative system. According to this theory, empowerment would signify a symmetric dialogue between the school library and school at the micro and macro levels. Furthermore, the dialogue would be rational and knowledge-based. We agree with this interpretation of empowerment. However, we believe that a more proactive understanding of the concept may be fruitful in a hypercomplex

society, characterized by autonomy, flexibility and initiative rather than a passive view.

We will introduce the term *power base* (Møller, 1996) to clarify our interpretation and use of the term *empowerment*. The concept refers to the base of power of a job or a specific function in society, which can vary from being rich to being deprived of power. We further divide the concept into two different types of power base: the *legal base* and the *legitimacy base*. *Legal-based power* refers to the legal framework of the job or function. *Legitimacy-based power* refers to professional and personal confidence in, and support for, the job or the function. We assert that it is of vital importance that there be a good balance between the two bases. At the same time it is important to indicate that there will always be a dynamic relationship between them, and that they affect each other. *Legal-based power* has to be as strong as possible in order to gain power in dialogues with representatives of professional and bureaucratic organizations on a national or local level where each party has an equal standing. To achieve power through academic and personal skills, *legitimacy-based power* needs to be distinct and have authority.

After presenting a brief outline of school libraries in Norway, below, we will discuss how to empower school libraries from this theoretical perspective.

The Status of School Libraries in Norway: a brief outline

The Legal Base

The Law

Basic education in Norway includes primary and lower secondary school (ages 6–15) and upper secondary school (ages 16–19). It is governed by the Education Act and Regulations to the Act (*Opplæringslova*, 1998, *Forskrift til Opplæringslova*, 1999). The section applying to school libraries states that all pupils shall have access to a school library. It also lays the groundwork for cooperation with public libraries. In both cases, the library must be adapted specifically to the school (section §9–2 of the Education Act, section 21–1 of the Regulations to the Act) and be open to pupils during school hours. There are no guidelines or regulations for either primary or secondary schools in terms of staffing, budgets, space and equip-

ment for school libraries. Each school is free to decide how to implement to law.

The Current National Curriculum

The national curriculum is another important tool for empowering school libraries at the government level. In Norway the curriculum for primary and lower secondary schools has a specific section on school libraries (*Læreplanverket for den 10-årige grunnskolen*, 1996). It states that the school library is of vital importance to educational and cultural activity at school. The joy of reading and learning to search for information are among its key phrases. The importance of school libraries is hardly mentioned in the national curriculum for upper secondary schools (*Reform '94*, 1993).

The New National Curriculum

A new national and comprehensive reform of basic education, called 'Knowledge Promotion' (*Introduction to Knowledge Promotion. Summary*, 2005) is due to be implemented in 2006. In this document, the Norwegian Ministry of Education and Research outlines the main lines of future basic education. School libraries are not mentioned in the document explicitly. However, school libraries are crucial to certain areas; basic commitments and basic skills.

From the basic commitments:

- Stimulate in pupils and apprentices/trainees the development of their own learning strategies and of their capacity for critical thought.
- Promote adapted teaching and varied working methods in the basic skills.

The basic skills:

- The ability to *express oneself orally*
- The ability to *read*
- The ability to *express oneself in writing*
- The ability to use information and communication technology

The Ministry has stated that these fields will be given priority and paid great attention in the curricula for all subjects.

Staffing and Budgets

The staffing of school libraries varies greatly. The average school librarian in primary and lower secondary schools works 5.48 hours per week.

One third of them have the required academic background: a minimum of 6 months of full-time study in school librarianship as a supplement to their teacher's education (*Statistikk for folkebibliotek*, 2001). The average school librarian in upper secondary schools works 33.3 hours per week. Just over half of them are qualified school librarians, having completed a minimum of three years of library science (*Statistikk for bibliotek og museum*, 2003).

The counties have financial responsibility for school libraries in upper secondary schools. The municipalities have responsibility for primary and lower secondary schools. The average annual grant per pupil, earmarked books and other media, was NOK 184 in 2003, varying from NOK 539 in one county to NOK 88 in another (*Statistikk for bibliotek og museum*, 2003).

The Legitimacy Base

School libraries in Norway have a highly variable base of legitimacy due to the decentralized political system and different political priorities at the local level. Furthermore there are great differences between schools, due to educational philosophy and practice. Schools with a dominant teacher- and textbook-oriented practice often have school libraries with little space and which receive little attention; schools with a more pupil-oriented practice and using a variety of work methods will have school libraries with more space and attention. Another key aspect of the legitimacy base is academic expertise in managing and using the school library. Norway still suffers from a lack of this expertise. From our point of view, school libraries in Norway, as elsewhere in the world, mirror schools' academic level, ethos and values (Willars, Sætre and Bernhard, 2002).

Empowerment of School Libraries Based on the Current Status

The ineffectual legal base and the variable legitimacy base mean that the present empowerment of school libraries is unpredictable. Policy directed at empowering school libraries has been decentralized to the regional and local levels. This means that the dialogue between the bureaucratic and professional organization and the school library depends on a responsible approach and attitude to the legal base. It is further dependent on the content and quality of the legitimacy base, which varies considerably from one school to the next.

There has been some frustration over the school library system having had difficulty achieving a symmetric position in dialogues, due to these insufficient power bases. We assert that increasing the power of the legitimacy base is the best starting point for empowering school libraries from a strategic perspective. School librarians, professionally trained in librarianship and in the educational field, will gain an increased status by the way the academic education will make them able to negotiate and discuss with school leaders and teachers in their 'language', and with students in their educational explorations.

In future, experience in managing and using school libraries in education may lead to an improvement to the formal framework and the legal base because argumentation on the part of school library services has been improved and professionalized. This strategic approach does not imply that national policy is of less importance. We need more elaborate legislation to arrive at a more predictable and visible school library situation.

Having discussed the overcoming of obstacles to empower school libraries in general, we will continue with a presentation of the national project 'Make Space for Reading!' (2003, 2005). This project is interesting as a policy document that may increase both the legal- and legitimacy-based power of the school library by integrating it with reading instruction and stimulation of reading.

The National Plan 'Make Space for Reading!'

Make Space for Reading! Norwegian Strategy for Stimulating a Love of Reading and Reading Skills, 2003–2007 (2003, 2005) focuses on improving the ability to read and the joy of reading. The plan covers all children from day care up to and including upper secondary education. It targets teachers, librarians, headmasters and parents. It seeks to contribute to reinforcing teachers' expertise in reading instruction and use of the school library. It further attempts to increase awareness of reading as a prerequisite for learning in all subjects, cultural competence and taking part in a democratic society. The plan is dynamic and open for revision from local and regional institutions, including the universities and university colleges. The 2005 revised edition was launched at World Book Day in April. 'Make Space for

Reading!' should be seen in conjunction with another ongoing national project 'The Cultural Schoolbag', a priority programme for cultural education within the school system. Starting this year, 'Make Space for Reading!' (2005) will run parallel to the new education reform 'Knowledge Promotion', and 'Make Space for Reading!' must follow the terms of this reform. Both plans stress the importance of reading.

Schools and municipalities receive financial support on an annual basis in order to implement the plan. In 2004 more than 200 projects were launched in Norwegian schools, covering reading habits, reading instruction, development of school libraries, boys and reading, screening of reading abilities, to mention a few. One of the plan's goals is for all schools to develop reading plans that incorporate these elements. On the local and regional level, schools are enthusiastic about the plan and much creative work is taking place all over the country for the benefit of pupils.

Empowering School Libraries by Making them Visible through Reading Projects

The main focus of 'Make Space for Reading!' is on reading, literacy and literature. The many reading projects will require a great variety of texts, adapted to a broad spectrum of reading ability. School libraries will provide the texts, often in collaboration with public libraries. It is a fact that school libraries are poorly integrated with the curriculum at many schools (Rafste, 2001). The reading and literacy projects will give school libraries the opportunity to play a vital part in education and to become more visible. Teachers and school librarians will be able to join forces to transform pupils into better and more engaged readers. Another important issue in the plan is to develop progressive reading plans in all subjects and in all years. This strategy will give school libraries a unique opportunity to build partnerships with school management and teachers.

Empowering School Libraries through 'Make Space for Reading!' Projects

A district in southern Norway has received financial support to build a network for school librarians. They hold workshops together and exchange ideas on how to develop school libraries. This allows them to expand their legitimacy base and makes it easier to communicate with the formal school system on an equal footing. Some of the schools in the network have

also individually applied for financial support to launch projects to stimulate reading. The school library has acted as a driving force for both pupils and teachers on these projects. School librarians have cooperated with teachers to draw up a good and rich selection of books for all pupils. The funding, though modest, inspires schools to work on reading and integrates school libraries, as a vital part of their activity. The school library is made visible to the bureaucratic and professional organization through this proactive type of action; it is achieving empowerment.

The National Network for School Library Professional Development

Supplementary training for teachers and school librarians and networking are crucial components of the plan. In the following, we will look at how these strategies can be seen as a policy intended to empower the school library and increase its legal and legitimacy base.

The national network for school library professional development was established in 2004 as part of the strategic plan 'Make Space for Reading!' Agder University College in Kristiansand and Bergen University College are in charge of coordinating the network. The main objectives of the network are to

- define the school library as a subject
- analyze the need for education and expertise within the field
- initiate and develop studies in the school library field
- make the school library visible as a learning arena

The network functions as a meeting place for different target groups involved in school library issues and for discussion and coordination of these issues. It also allows discussion and influence on legal-based power on the national and local level. Representatives of all the universities and university colleges have been invited to join the network and will constitute an important voice in putting school libraries on the agenda at this level of education. This can thus be seen as another way of empowering them. In addition, school libraries can be empowered through collaboration with other networks, especially networks for reading, writing and literature. Last but not least, developing supplementary teacher training is seen as an effective way of improving the legitimacy-based power of the school library.

We will now discuss the last two ideas and describe actions that have been taken or which will soon be taken.

Empowering School Libraries through Cooperation between Networks on the National Level

Building bridges between networks may be an effective way of putting school libraries on the agenda at the level of higher education. The National Centre for Reading Education and Research established at the University of Stavanger will be one of our partners. The school library sector should be integrated with the research and the courses at the centre. The network for Norwegian covering writing, reading and literature is another important partner. We have already developed the joint study 'Reading instruction, literature and school libraries' (see below).

Increasing the Legitimacy Base through Teachers' Supplementary Training and New Studies

The supplementary training already comprises studies and workshops in four different fields:

1. Workshops on information literacy for teachers at teacher training colleges and university colleges.
2. Workshops on how to use school libraries as an integrated part of instruction at teacher training colleges.
3. A new 15-credit study module for teachers and librarians on 'Reading instruction, literature and school libraries'.
4. A new 30-credit study module for teachers and librarians on 'Information literacy' at Agder University College. This college already has two other 30-credit study modules in school librarianship. Bergen University College has also developed three different modules in librarianship with a focus on education.

Empowerment through Strategic and Temporary National Plans

In many ways, 'Make Space for Reading!' has been like a breath of fresh air for education at every level. All schools can apply for funding to start a project they are enthusiastic about and through which they believe their pupils will become better readers and more independent learners. By focusing on reading, the school

library is made visible as a resource centre for both printed and electronic texts, a centre for both academic and leisure reading. In addition, the school librarian may act as an integral contributor to literacy development. If the school library is poorly developed, reading promotion projects may make the invisible school library more visible. In addition, the school library may be challenged to respond to the need for more expertise and resources.

On the other hand, the strategic plan may widen the gap between school libraries even more than now. This may be the case because many schools cannot manage to draw up a project and write an application for funding. And if they do submit an application, they will still not be sure that it is good enough. This may be the situation at schools with a very weak power base. The plan calls for proactive and creative schools and proactive school libraries. Instead of empowering the libraries, the plan may lead to disempowerment.

It is interesting to note that the plan covers all levels of education. It aims to empower school libraries through both a top-down and a bottom-up strategy. The workshops and the new study modules which the plan has made possible are positive ways of empowering the legitimacy base of the school library. The same applies to the national network for school library professional development.

An important question to ask about a 5-year plan is whether the duration is adequate to develop anything lasting. The Directorate for Primary and Secondary Education is aware of the problem of good results from projects of limited duration fading away at the end of the project period. This is why allocation of funds to local projects is the domain of the state education administration in the counties (the county governors). They are responsible for setting priorities, follow-up, reporting and joint regional actions. It is clear in the plan that the focus will be on a lasting strategy for all parties to stimulate the joy of reading and reading skills. The plan will be evaluated by the SINTEF research environment in Trondheim from 2004 to 2008.

The plan has been received enthusiastically, and it will be exciting to see how the actions in 'Make Space for Reading!' are implemented at schools, and how school libraries are integrated with these actions. It will also be interesting to

observe the extent to which the fires that have been lit under people have a long-term effect on joy of reading and development of school libraries. We are concerned that the fire that has been lit may gradually die down unless the state does not take other drastic measures to follow-up 'Make Space for Reading!' in order to increase empowerment.

Conclusion

We have described how present school library policy seeks to empower school libraries. Empowerment has been interpreted as a symmetric dialogue between bureaucratic and professional organizations, on the one hand, and the school library, on the other; a dialogue where the school library also has a say in decision-making and is proactive. We have also introduced the concept of *power base*, which consists of the *legal* and the *legitimacy base*. The former is the formal framework of the school library. The latter is the personal and professional confidence in, and support for school libraries as an educational instrument. This conceptual framework has proved to be fruitful in discussing the empowerment of school libraries. We assert that there is a dynamic relationship between the two sides of the power base. Consequently, it is of vital importance that there be both strong legislation and highly qualified and skilled professionals in school libraries in order to achieve a proactive and symmetric dialogue on school library matters.

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Access to Electronic Healthcare Information Resources in Developing Countries: experiences from the Medical Library, College of Medicine, University of Nigeria

Chris Watts and
Ijeoma Ibegbulam



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Abstract

This paper presents results from a preliminary investigation into the situation regarding access to electronic healthcare information in developing countries, focusing on the circumstances in the Medical Library, College of Medicine, University of Nigeria. A review of current literature examines broader issues around access to electronic information in developing countries, and specific issues regarding electronic healthcare information. Studies that particularly focus on the situation in Nigeria are identified. Information gathered from a series of interviews with the librarian at the Medical Library identify a number of issues, including the lack of an adequate ICT infrastructure and affordable online access, and a need for library staff and library users to gain ICT skills and information seeking skills. Areas for further research are identified.

Keywords: Healthcare information; Electronic information sources; Access; Nigeria; University of Nigeria

Introduction

The expansion in the availability of electronic healthcare information in recent years has given access to a wealth of resources. However, there remains a discrepancy between those who do and do not have access to the appropriate technologies or necessary monies to retrieve these resources. There are also issues arising concerning the appropriateness of much of the available information to the needs of healthcare professionals in developing countries.

The study presented here looks at the availability and uptake of electronic healthcare information resources in the Medical Library, College of Medicine, University of Nigeria, and examines some of the barriers to providing these resources. The principal author was a researcher on a previous study into the provision of electronic information resources in Nigerian libraries based at Liverpool John Moores University (Ashcroft and Watts, 2005), and has a particular interest in electronic healthcare information resources in developing countries. An extensive literature review was carried out into both the broader issues around access to electronic information in developing countries, as well as specific issues regarding electronic healthcare information. Studies that particularly focused on the situation in Nigeria were identified. Information was then gathered from a series of interviews with the librarian at the Medical Library and the results of those interviews, and the issues raised therein, are presented here.

The 'Digital Divide' and the 'Know-do Gap'

The term 'Digital Divide' has become well established in describing the division between those people who do or do not have access to information and communication technologies (ICTs) (bridges.org, 2002) Norris (2001) provides an interesting analysis of this division, describing a multi-dimensional digital divide that exists globally, socially and democratically. The global digital divide is the difference in access to ICTs between countries; the social digital divide is the difference in access to ICTs between the citizens of a country; the democratic digital divide is the difference between those who are or are not able to use ICTs to participate in public life.

The multi-dimensional digital divide that Norris describes has a clear impact on the provision of electronic healthcare information in the developing world, both between countries and within them. Electronic healthcare information resources emerging from the developed world may not necessarily be relevant or appropriate to the needs of those living in developing countries. It may be that knowledge no longer functions accurately when disconnected from its environment (Jimba, 2000), that information is perceived as having little local relevance (Carter, 2005), or there is a lack of evidence-based research that is applicable for healthcare practitioners in developing countries (Chinnock et al, 2005). Although there is continuing evidence for increased access to ICTs and online facilities in the developing world, physical access to suitable ICTs and reliable connections to the Internet remains challenging and costly for many. In Nigeria – where this study has taken place – 0.5 percent of the population are Internet users: the same statistic in the United States is 54 percent (Central Intelligence Agency, 2004). Results from a previous study of Nigerian libraries suggested that the high cost of hardware, software and – particularly – ISPs were a significant barrier to provision of electronic information resources (Ashcroft and Watts, 2005).

Of late, a new expression has emerged that refers to some of the issues previously covered by the term 'digital divide'. The 'know-do gap' describes the discrepancy between having access to knowledge, and translating that knowledge into practice. In the World Health Organisation report *World Report on Knowledge for Better*

Health: Strengthening Health Systems, Lee Jong-Wook, the Director General of the World Health Organisation, states that 'There is a gap between today's scientific advances and their application: between what we know and what is actually being done' (World Health Organisation, 2004, p. XI). Godlee et al (2004) refer to the 'know-do gap' being at least as great in developed countries as it is in developing countries.

This is an interesting shift in rhetoric, suggesting a possible consensus that knowledge is both more freely available and increasingly accessible to all; the difficulty now is how to transform that knowledge into effective practice.

Policy and Strategy

Issues arising from the digital divide or know-do gap have been acknowledged by the international community and, as a result, there are a number of initiatives that are attempting to understand and address these issues.

The World Summit on the Information Society is taking place in two phases, with the first held in Geneva in December 2003, and the second phase held in Tunis in November 2005. An introduction to the purpose of the summit states that

Paradoxically, while the digital revolution has extended the frontiers of the global village, the vast majority of the world remains unhooked from this unfolding phenomenon. (World Summit on the Information Society, 2004)

The summit has produced both a *Plan of Action* and a *Declaration of Principles*. (World Summit on the Information Society, 2003) In terms of e-health, the *Plan of Action* discusses facilitating access to medical knowledge and locally relevant content, promoting international standards for data exchange and encouraging the expansion of ICTs to remote and underserved areas, and vulnerable populations. The second phase of the summit was concerned with measuring and evaluating the success of the *Plan of Action*.

The G8 Summit took place at Gleneagles in Scotland in July 2005, and built on a history of addressing ICT issues from previous annual summits. In Okinawa in 2000 a Digital

Opportunities Task Force was developed to tackle issues around the digital divide (G8 Kyushu–Okinawa Summit, 2000). This was developed in Evian in 2003, where G8 leaders approved the action plan, Science and Technology for Sustainable Development (G8 Evian Summit, 2003). For the Gleneagles Summit, there was a Joint Science Academies Statement on Science and Technology for African Development (Joint Science Academies, 2005), which set out a series of recommendations. The document suggests that there must be recognition of the role of science, technology and innovation in the success of development in Africa, including solutions appropriate to local needs. African countries require the methods and infrastructure to exploit their knowledge, and African universities need to be supported and developed as centres of excellence in this field.

The World Health Organisation report *World Report on Knowledge for Better Health: Strengthening Health Systems* (World Health Organisation, 2004) calls for health research systems to promote mutual learning, problem solving and innovation. The report advocates robust national health research systems providing equitable access to research information. These should be open to all countries and include all stakeholders, including health service providers, policy makers and civil society.

A *Global Review on Access to Health Information in Developing Countries* was intended to include a large range of relevant participating organizations such as the *British Medical Journal*, the Global Forum for Health Research and the World Health Organisation. The initiative was designed as a review of lessons learned, progress and ways forward in providing access to information for health professionals in developing countries, but did not get off the ground because of lack of political and financial commitment (International Network for the Availability of Scientific Publications, 2004).

The launch of this review was accompanied by a discussion paper published in *The Lancet* entitled ‘Can we achieve health information for all by 2015?’ (Godlee et al, 2004a). This paper presents an excellent overview of the progress to date, such as access to health information becoming a key international development issue. It is important that information flows take into account user needs, rather than simply ‘pushing’ information upon them. Key to the sustainability of many development projects is working to

build local capacity; this belief is shared by many other organizations, such as bridges.org (<http://www.bridges.org/>) and SATELLIFE (<http://www.healthnet.org/whoweare.php>).

Godlee et al (2004a) conclude by suggesting four broad areas for future activity: improved access to essential information for health professionals; improved connectivity; identification and understanding of barriers to using information in different locations (partially the know-do gap); and improving quality of healthcare information in terms of reliability, relevance and usability.

Existing Research

There is some existing research into the provision of electronic information in developing countries; there is a lack of research specifically into electronic healthcare resources. Commentators continue to call for an increase into research in this area (Godlee et al, 2004b; World Health Organisation, 2004; World Summit on the Information Society, 2003). The literature presented here is drawn both from general studies in this area, and also from literature that specifically discusses the situation in Nigeria: the focus of this study.

Chisenga (2004) carried out a survey of the use of ICTs in ten African public library services. The survey found that, although most libraries had Internet connectivity, almost none were offering Web-based information services to their users. Lack of funding remains problematic in developing ICT services, with many libraries relying on donor assistance, or choosing to establish cyber cafés as a means of providing Internet access and generating revenue. Few libraries had ICT strategies for development. Chisenga identifies four principal barriers to the effective provision of ICTs in the surveyed libraries: a lack of adequate or reliable funding; a lack of strategic planning; a lack of use of the Internet to provide information services to users; and a lack of consistent training for library users in new ICT services.

There is evidence that access to ICTs themselves remains a problem. Ondari-Okemwa (2004) carried out a survey of 46 sub-Saharan countries to discover the impediments to providing access to ‘global knowledge’ in sub-Saharan Africa. Respondents suggested that unreliable electricity supply and high cost of ICTs were significant barriers to accessing online information.

Similarly, in a study of access to electronic information resources in Nigerian libraries, Ashcroft and Watts (2005) found that unreliable electricity supplies and prohibitively high costs of Internet Service Providers (ISPs), hardware and software were barriers to ICT provision. In a discussion about ICTs in African universities, Karbo (2002) also identifies the problem of the cost of providing ICTs as well as a suitable infrastructure to house them. A study of the use of electronic information resources at the University of Agriculture Library in Abeokuta, Nigeria, also found that constraints to accessing resources were principally infrastructural; specifically, a lack of computer terminals and power supply outages. (Oduwale and Akpati, 2003)

Lack of adequate ICT skills and training causes difficulties, both amongst staff providing access to ICTs and their users (Ashcroft and Watts, 2005; Idiodi, 2005; Karbo, 2002). This may be compounded in some countries by low basic literacy levels amongst the population (Ondari-Okemwa, 2004).

Funding itself may be poor. Okiy (2005) describes the situation in Nigerian libraries, which receive poor allocations from Government, and therefore look elsewhere for income. Costs may be passed on to users themselves. For example, the University of Jos introduced library fees for its students. Akporhonor (2005) reports a similar situation at Ambrose Alli University and Delta State University.

There is some evidence that many ICT users in developing countries gain access to Internet facilities through cybercafés, again passing costs on to users. Jagboro (2003) conducted a study of Internet usage in Nigerian universities and found that 45.2 percent of respondents accessed the Internet in cybercafés. Jagboro suggests that this high score may be due to the proximity of cybercafés to user facilities, such as hostels and lecture halls. However, access to cybercafés may also be problematic. Adomi (2005) reports on a price increase in cybercafé services in Abraka, Nigeria. This was brought about after cybercafé owners invested in generators in order to provide a reliable electricity supply, as well as meeting high costs of ISPs. The price increase was reversed as it led to a decrease in customer patronage.

Some research exists about the use of electronic healthcare resources in Nigeria. Ajuwon (2003) carried out a study of uptake of ICTs by health

science students at the University College Hospital, Ibadan. This study found that 57.4 percent of students sampled could not use a computer, that there was a need for ICT literacy to be added to the curriculum and that there was a need for adequate computer laboratories to be established. Ogunyade and Oyibo (2003) examined the use of Medline – the database of life sciences and biomedical bibliographic information – by medical students at the University of Lagos. The study found that use of the database was poor, due to lack of awareness, lack of access to computers, insufficient training and the high cost of provision.

Medical Library, College of Medicine, University of Nigeria

This study was carried out in the Medical Library, College of Medicine, University of Nigeria. The library, which was established in 1967, is located within the University Teaching Hospital on the Enugu Campus of the University of Nigeria. The library is currently one of the four largest medical libraries in Nigeria, with a stock of more than 30,000 books, monographs and journals. The library has private study rooms and a reading area that seats 350 users. Users include College of Medicine staff, hospital staff, medical students and other health professionals (Iroka, 2004).

Access to Electronic Information Resources

The library is not currently automated, and has one computer that is used for secretarial purposes. This computer does not provide access to online facilities. However, within the same building as the library, there is a cybercafé that provides library users with broadband access to the Internet and email. The library signposts users to the cybercafé if they wish to use online facilities. The library also distributes circulars to its community of users in the various departments of the College of Medicine giving details of the facilities available in the cybercafé.

The library provides users with access to a range of CD-ROMS. The College of Medicine purchased Medline (1990–2000) CD-ROM for library users. This database provides users with many thousands of references in the field of life sciences and biomedical bibliographic information, although the version purchased will not now provide references to the most recent developments in this field. Free access to the

complete version of Medline is available online in the cybercafé, and some users are able to make use of this for conducting literature searches.

The library provides users with the e-TALC CD-ROM, which is distributed free-of-charge by the UK-based charity Teaching-aids at Low Cost (TALC). e-TALC provides users with access to large amounts of high-quality, copyright free, health education and training material. CD-ROM discs are provided free to developing countries, and TALC have distributed over 50,000 discs as of November 2004. Organizations that contribute to e-TALC include the World Health Organisation, the *British Medical Journal*, the Cochrane Library, and the Wellcome Trust. The CD-ROM is designed for ease of use and accessibility, through a thorough in-house testing programme. Materials are presented in HTML and PDF format, and the software to use the resources is supplied on the CD-ROM, including a search engine. Some examples of the variety of types of materials provided on the latest edition of the CD-ROM include:

- Latest full-text issues of the *British Medical Journal*
- *A Parrot on Your Shoulder* – a guide for those working with children with HIV/AIDS
- Evidence-based abstracts from the *Cochrane Library*
- Full text of the open-access medical journal *PloS Medicine*
- A radio script of *Health considerations for refugees*
- *International Network for the Availability of Scientific Publications* (INASP) latest newsletter
- A slide set and script from *HIV/AIDS – Clinical Manifestations in Adults (Africa)* (Teaching-aids at Low Cost, 2005)

The library also provides CD-ROMs from the World Health Organisation and from the UNAIDS Library (UNAIDS is the Joint United Nations Programme on HIV/AIDS).

In the cybercafé, as well as accessing Medline, users also access Medscape. This is a free online resource for healthcare professionals, which offers a variety of information, including continuing medical education, journal articles, medical news, conference coverage and drug information. Medscape is designed to make the process of gathering information for health

professionals simpler, less time-consuming and more productive (Medscape, 2005).

The College of Medicine and Medical Library are also supported by the Health InterNetwork Access to Research Initiative (HINARI), with users gaining access to this resource online through the cybercafé. HINARI provides free or very low cost online access to over 2,000 full-text journals in bio-medical and associated social sciences. The initiative began in July 2001, with six major publishers – Blackwell, Elsevier Science, Harcourt Worldwide STM Group, Wolters Kluwer International Health and Science, Springer Verlag and John Wiley – signing up to a statement of intent. (Health InterNetwork Access to Research Initiative, 2001) Twenty-two further publishers joined the initiative in May 2002, and the list of publishers, and access to their journals, continues to grow. Eligibility is based on GNP per capita according to World Bank figures, and non-profit organizations in Nigeria are entitled to free access to HINARI resources. (Health InterNetwork Access to Research Initiative, 2005)

Strategies and Policy

Although no written strategies or policies have been produced as yet, the University is sensitive to the issue of providing ICTs and Internet access. Departments across the University have been tasked with developing their own strategies, and the intention is that these will inform a University-wide policy on ICT provision.

The College of Medicine is planning to equip every department with access to at least one computer. The College has begun acquiring computers, and this has been carried out mostly through donations. When this is completed, the intention is to link all departments to the cybercafé for access to the Internet.

Constraints

Use of the cybercafé is not unproblematic. The facility was a contract awarded by Nigeria's Educational Trust Fund in 2002. Although the project is completed, there are continuing problems providing consistent connections to the Internet. As a result, the University is unhappy with the project, and will not fund the cybercafé until these problems are resolved. As a result, the cost of using the cybercafé is prohibitively expensive (120 Naira per hour), with most users only being able to afford to spend up to

thirty minutes online each week. In this short period of time, many users only make use of the Internet to send and receive emails.

There are skills training needs amongst both library staff and library users. The University has arranged some training for staff in computer applications in libraries and library work. Most staff still require basic ICT training, including information finding skills and troubleshooting skills. Likewise, most users have ICT skills and training needs. Some training may be available by arrangement with the cybercafé, although this is arranged between individuals and cybercafé staff, and it incurs a cost to the individual.

Initiatives that may help improve access to electronic healthcare information resources are still in their infancy and are yet to impact on the medical library presented in this study. The National Virtual Library of Nigeria is being administered by the Federal Ministry of Education. This is currently focused on equipping libraries with computers and Internet access, rather than establishing a digital library resource. (National Virtual Library of Nigeria, 2005) The Nigerian Universities Network (NUNet) project is run by the Nigerian National Universities Commission, and is intended to encourage universities to share knowledge and information. However, this project has not fully taken off, so information sharing is yet to take place between libraries, as libraries and universities are not fully networked (National Universities Commission, 2005).

Discussion and Conclusions

There are two strands that emerge from the available literature into electronic healthcare information resources in developing countries: making relevant information available to health care professionals; and providing reliable and affordable physical access to that information.

In the case of the medical library examined in this study, the lack of an adequate ICT infrastructure appears to be the principal reason for hindering access to online health information resources. Given the amount of healthcare information currently being made available online, physical access to the ICTs that provide that information is clearly a more pressing problem than a lack of available information itself.

The scope of this study cannot be seen to be demonstrative of the situation that information providers face globally. Further research may indicate how indicative the situation at the Medical Library in the University of Nigeria Teaching Hospital is of other medical libraries and information resources in similar situations.

There is much work being carried out internationally to make healthcare information freely available online. As this study has indicated, the library has access to a large variety of information through initiatives such as HINARI, Medline and Medscape. An inspection of INASP Health Links – a gateway to selected websites of relevance to healthcare professionals and other associated people in developing countries – demonstrates the broad variety of healthcare information resources that are being made freely available online. (International Network for the Availability of Scientific Publications, 2005) Whether that information is relevant to the needs of library users is, again, a subject for further research: a user needs analysis would address this.

However, given the amount of healthcare information currently being made available through online resources, together with the issues arising around how appropriate available information is to user needs, it is clear that, in the case of the medical library presented in this study, both library staff and library users will require both the necessary information seeking skills, and a degree of basic ICT skills, to find appropriate resources that meet their requirements.

Further Research

This study presents the situation in one medical library, and more exploratory work is needed to determine the situation both nationally and internationally.

As Godlee et al (2004a) suggest, there is a need for a greater and more detailed understanding of healthcare professionals' information needs. Research into this area also needs to understand and contextualize its subjects' access to information – in particular, electronic information – in order fully to understand both information needs and potential and existing barriers to those needs.

Research would also be useful into awareness of current electronic healthcare information

resources. This need not be confined to health-care professionals themselves, but also to those information professionals who are providing a service to them.

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IFLA 2005: Report of Achievements

14 December 2005

Dear Colleagues

This year, 2005, was an exciting and productive year for IFLA. Dominated by engagement with the World Summit on the Information Society (WSIS – <http://www.itu.int/wsis>), it was also a most successful year in many other respects including professional work, membership services and addressing the governance and administration of the Federation.

The Three Pillars, adopted by the Governing Board in December 2004, provides a powerful framework for both the presentation and the reconsideration of IFLA's activities and priorities. Its elements – Society, Profession, Members – identify the domains of IFLA's work for libraries and information services worldwide, which are supported by IFLANET, IFLA HQ, the regional and core activity offices, and the Governing Board. A number of initiatives have been taken to strengthen the alignment between IFLA's operations and its priorities including the re-presentation of the budget in terms of the three pillars and the initiation of a strategic plan which will be considered by the GB at its March meeting. The Board has also established the Working Party on Governance to review the operation of IFLA's statutes, which were approved in 2000. Some ideas from the Working Party will be circulated for comment early in 2006. This may result in some changes to the Statutes being put to the members this year and others being considered at a later date.

The Society Pillar recognizes the vital role of libraries and information services in building strong and healthy communities, nations and organizations. Our WSIS advocacy, over the last four years through the Geneva phase and to this November's Summit meeting in Tunis, highlighted the important role that libraries play in creating an information society for all (a report will shortly appear on IFLANET). We must now

hold the governments to the commitments they made in the WSIS process.

Our success in this process, including our very successful pre-Summit conference at the Bibliotheca Alexandrina, Egypt, is the result of coordinated work by many colleagues including national associations, individuals and those who were able to join national WSIS delegations. It has been a demonstration of the strength and importance of our Members Pillar – which we have also strengthened this year by implementing the new national association fee structure and by introducing the new 'Other Associations' category. And, to encourage rejuvenation of the profession and IFLA, the December Governing Board meeting confirmed the continuation of the Student Affiliate category.

IFLA's commitment to societal issues was also demonstrated in the continuing work of FAIFE, which included an investigation and two statements on the human rights situation in Tunisia (the host of WSIS), and the dedicated advocacy of CLM, which extended its work on IP policy from WIPO to the WTO ministerial meeting this month. These core activities project our professional interests in regard to society, tackling many of the contextual issues which affect the operations of libraries and information services around the world.

In addition, IFLA responded to the dreadful Tsunami, which hit several nations around the Indian Ocean twelve months ago, and to the following disasters in other regions. We drew attention to the importance of libraries and information services, offered support to our colleagues in difficulty and established the IFLA Relief and Development Partnership (IRDP) together with several major national library associations. IRDP will enable us to provide some assistance in response to future disasters, mainly to help the assessment of the damage and planning for the future but also to promote disaster preparedness.

Through this initiative we help to build, and rebuild when necessary, the strong professional structures which are the emphasis of the Profession Pillar. Other professional activities this year have included: the very successful World Library and Information Congress in Oslo; the programs of IFLA's sections and divisions; and three very important meetings, the Interlending Conference in Tallinn in September, the High Level Colloquium on Information Literacy and Lifelong Learning at the Bibliotheca Alexandrina last month and the IFLA Meeting of Experts on an International Cataloguing Code (IME ICC3) in Cairo this month. These and the work of PAC, ALP, ICABS and UNIMARC contribute to the vitality and relevance of our global profession. Their programs often result in publications, such as the very timely *Preparing for the Worst, Planning for the Best: Protecting our Cultural Heritage from Disaster* (Eds. Nancy Gwinn and Johanna Wellheiser, IFLA Publications no. 111, Munich, Saur, 2005), as well as articles in *IFLA Journal* which moved to Sage Publications in 2005, laying the foundation for a higher quality and more attractive journal.

In February, we welcomed Dr Peter Lor as our Secretary General, launching him into a very busy program of work with the Governing Board, the Professional Committee, the staff and other colleagues to streamline the operations of IFLA. Peter commissioned an external review of IFLA's business processes which was considered by the GB in December resulting in the imple-

mentation of some of its recommendations and further consideration of others. It is clear that the highest priority is to renew IFLA's IT systems, both IFLANET and the 'back end' business systems, so as to make the organization more responsive and efficient. The 2006 budget makes provision for the first stage of this renewal, the detailed project planning, but it is evident that additional resources will be needed to complete the project without delay.

Support from members for this enhancement and for the continuing work of IFLA, and especially the core activities, will be essential if we are to fulfil our mission fully. To that end, the GB approved the creation of an IFLA Fund, which has already raised some money to assist our advocacy efforts. The membership renewal form will include opportunities for members to contribute further to advocacy and the core activities. We encourage you and your organizations to contribute so that IFLA can continue to be the strong global voice for libraries and information services.

Our heartfelt thanks to all who have contributed so much to our success this year: members, officers, staff and supporters.

We wish you all the best for 2006 – Happy New Year!

<i>Alex Byrne</i>	<i>President</i>
<i>Claudia Lux</i>	<i>President-elect</i>
<i>Peter Lor</i>	<i>Secretary General</i>

Libraries, the Information Society in Action

Address to Plenary World Summit on the Information Society

Alex Byrne, President of IFLA

Tunis, 18 November 2005

President of the World Summit on the Information Society, Excellencies, ladies and gentlemen. We congratulate those who have been involved in this long WSIS process on what has been achieved to date and encourage full commitment to the implementation of the goals expressed in Geneva and here in Tunis.

I have the honour to speak to you as the President of the International Federation of Library Associations and Institutions which is the global organization for libraries and information services and represents more than 500 thousand library service points as well as the 2.5 billion registered library users around the world.

We are concerned with the young child who opens his first book or clicks on her first website, with the student who researches a topic, with the professional building a career, with the farmer trying to be more competitive, with the researcher using e-journals to investigate a new material or prevention of a disease and with all the people whose lives are changed through ready access to relevant and reliable information in any format.

We stand with the Secretary-General of the United Nations and other distinguished speakers in stating without equivocation.

Everyone has the right to freedom of expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

The Federation and our member organizations are vitally involved with the creation of the Information Society and its consequences for both economic and social development. To advance that agenda, which is vital for a secure and fair

world, last week the Federation held a pre Summit meeting, Libraries, the Information Society in Action in conjunction with UNESCO and the Bibliotheca Alexandrina. We discussed the key issues of the information society and proclaimed a manifesto, The Alexandria Manifesto on Libraries, the Information Society in Action.

The Manifesto recognizes that libraries and information services are essential to the roll out of the inclusive Information Society. Their impartial operation helps to safeguard universal civil rights and intellectual freedom. The unique feature of libraries and information services is that they respond to the particular questions and needs of individuals, complementing the general transmission of knowledge by the mass media. They build capacity and provide support and training for effective use of digital and other information resources. Libraries are critical to the development agenda and help to realize the Millennium Development Goals, including reduction of poverty.

To enable access to information by all peoples, the International Federation of Library Associations and Institutions is committed to the fundamental human rights to know, learn and communicate without restriction. It opposes censorship and supports balance and fairness in intellectual property regulation. IFLA is also vitally concerned to promote multilingual content, cultural diversity and the special needs of Indigenous peoples, minorities and those with disabilities.

IFLA urges national, regional and local governments as well as international organizations to

- invest in library and information services as vital elements of Information Society strategies, policies and budgets
- promote open access to information and recognize the importance of information literacy and vigorously support for strategies to create a literate and skilled populace which can advance and benefit from the global Information Society.

The version of this paper to be loaded to the website includes the key statements by IFLA, the

Information Literacy Experts Meeting and the Conference of Directors of National Libraries.

Your Excellency, delegates and observers, I thank you for your time and encourage you to continue the work to create an information society for all, an information society which guarantees the dual freedoms of access to information and of expression and which will be facilitated by strengthening the global network of libraries.

Associated documents

Alexandria Manifesto on Libraries, the Information Society in Action

Manifeste d'Alexandrie sur les bibliothèques, la société de l'information en action

Manifiesto de Alejandrina sobre Bibliothecas: la Sociedad de la Información en Acción

Statement: Beacons of the Information Society – The Alexandria Proclamation on Information Literacy and Lifelong Learning

Faros para la Sociedad de la Información – Declaración de Alejandría sobre la alfabetización informacional y el aprendizaje a lo largo de la vida

Maintaining our digital memory: a declaration of support for the World Summit on the Information Society

Conservation de notre mémoire numérique: une déclaration de soutien au Sommet mondial de la société de l'information

IFLA Statements

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Alexandria Manifesto on Libraries, the Information Society in Action

Libraries and information services contribute to the sound operation of the inclusive Information Society. They enable intellectual freedom by providing access to information, ideas and works of imagination in any medium and regardless of frontiers. They help to safeguard democratic values and universal civil rights impartially and by opposing any form of censorship.

The unique role of libraries and information services is that they respond to the particular questions and needs of individuals. This

complements the general transmission of knowledge by the media, for example, and makes libraries and information services vital to a democratic and open Information Society. Libraries are essential for a well informed citizenry and transparent governance, as well as for the take-up of e-government. They also build capacity by promoting information literacy and providing support and training for effective use of information resources, including Information and Communication Technologies. This is especially critical in promoting the development agenda because human resources are central to economic progress. In these ways libraries contribute significantly to addressing the digital divide and the information inequality that results from it. They help to make the Millennium Development Goals a reality, including reduction of poverty. They will do more with quite modest investments. The value of the return is at least 4–6 times the investment.

In pursuit of the goal of access to information by all peoples, IFLA supports balance and fairness in copyright. IFLA is also vitally concerned to promote multilingual content, cultural diversity and the special needs of Indigenous peoples and minorities.

IFLA and libraries and information services share the common vision of an Information Society for all adopted by the World Summit on the Information Society in Geneva in December 2003. That vision promotes an inclusive society based on the fundamental right of human beings both to access and to express information without restriction and in which everyone will be able to create, access, use and share information and knowledge.

IFLA urges national, regional and local governments as well as international organizations to:

- invest in library and information services as vital elements in their Information Society strategies, policies and budgets;
- upgrade and extend existing library networks to obtain the greatest possible benefits for their citizens and communities;
- support unrestricted access to information and freedom of expression;
- promote open access to information and address structural and other barriers to access; and
- recognize the importance of information literacy and vigorously support strategies to create a literate and skilled populace which can advance and benefit from the global Information Society.

Adopted in Alexandria, Egypt, Bibliotheca Alexandrina, on 11 November 2005.

Beacons of the Information Society: The Alexandria Proclamation on Information Literacy and Lifelong Learning

Celebrating this week's confirmation of the site of the Pharos of Alexandria, one of the ancient wonders of the world, the participants in the High Level Colloquium on Information Literacy and Lifelong Learning held at the Bibliotheca Alexandrina on 6–9 November 2005 proclaim that information literacy and lifelong learning are the beacons of the Information Society, illuminating the courses to development, prosperity and freedom.

Information Literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations.

Lifelong learning enables individuals, communities and nations to attain their goals and to take advantage of emerging opportunities in the evolving global environment for shared benefit. It assists them and their institutions to meet technological, economic and social challenges, to redress disadvantage and to advance the well being of all.

Information Literacy

- comprises the competencies to recognize information needs and to locate, evaluate, apply and create information within cultural and social contexts;
- is crucial to the competitive advantage of individuals, enterprises (especially small and medium enterprises), regions and nations;
- provides the key to effective access, use and creation of content to support economic development, education, health and human services, and all other aspects of contemporary societies, and thereby provides the vital foundation for fulfilling the goals of the Millennium Declaration and the World Summit on the Information Society; and
- extends beyond current technologies to encompass learning, critical thinking and interpretative skills across professional boundaries and empowers individuals and communities.

Within the context of the developing Information Society, we urge governments and intergovernmental organizations to pursue policies and programs to promote information literacy and lifelong learning. In particular, we ask them to support

- regional and thematic meetings which will facilitate the adoption

of information literacy and lifelong learning strategies within specific regions and socioeconomic sectors;

- professional development of personnel in education, library, information, archive, and health and human services in the principles and practices of information literacy and lifelong learning;
- inclusion of information literacy into initial and continuing education for key economic sectors and government policy making and administration, and into the practice of advisors to the business, industry and agriculture sectors;
- programs to increase the employability and entrepreneurial capabilities of women and the disadvantaged, including immigrants, the underemployed and the unemployed; and
- recognition of lifelong learning and information literacy as key elements for the development of generic capabilities which must be required for the accreditation of all education and training programs.

We affirm that vigorous investment in information literacy and lifelong learning strategies creates public value and is essential to the development of the Information Society.

Adopted in Alexandria, Egypt at the Bibliotheca Alexandrina on 9 November 2005.

Latest Revision: 21 November 2005.

IFLA, WSIS and Intellectual Freedom in Tunisia

The following statement was issued by IFLA on 30 September 2005:

On the occasion of the launch of the IFLA/FAIFE and the International Freedom of Expression Exchange Tunisia Monitoring Group (IFEX-TMG) reports on the current state of intellectual freedom in Tunisia:

- IFLA restates its strong commitment to the fundamental human rights to know, learn and communicate without restriction.
- IFLA opposes any form of censorship and violations of these rights, and consequently we look upon the human rights situation in Tunisia with deep concern.
- IFLA confirms its wholehearted commitment to the success of the WSIS process and expresses its concern that the policy positions of the host nation might undermine the credibility of the process. We therefore urge the Tunisian government to remove barriers to open access to information for all its citizens that are imposed by its policies.

As a participant in the WSIS process IFLA has successfully put libraries on the agenda. The aim is to promote a fair and just knowledge and information society which is vitally supported by libraries and information services. Libraries are essential to a transparent, accountable, and democratic Information Society in which they help to create a well-informed citizenry and lay a basis for good governance. IFLA shares the common vision of an Information Society for All adopted by the World Summit on the Information Society in Geneva in November 2003. That vision promotes an inclusive society in which everyone will be able to create, access, use and share information and knowledge. This means providing the opportunity for people to seek, receive and impart information and ideas without restriction, in accordance with Article 19 of the Universal Declaration of Human Rights. Furthermore, IFLA regards libraries as a living expression of this principle and therefore:

- IFLA looks forward to outcomes from WSIS that fully endorse the principle of intellectual freedom and recognize the importance of libraries as instruments of this freedom.
- IFLA urges national, regional and local governments as well as international organizations to invest in library and information

services as vital elements of their Information Society strategies. To achieve this goal, IFLA stresses the importance of removing barriers to open access to information for all, whether these barriers are social, structural, economic or legal, and seeks to draw attention to the politico-legal and extra-judicial impediments imposed by governments.

Consequently,

- IFLA urges the Government of Tunisia to remove the impediments to freedom of access to information, freedom of expression and freedom of association before, during and after the meeting of the World Summit on the Information Society in Tunis in November 2005.

The full IFLA/FAIFE report on the mission to Tunisia can be requested via email from the FAIFE Office: sha@db.dk It will soon be available from IFLA's website: www.ifla.org (an announcement with the URL will soon be posted on IFLA-L/FAIFE-L) The official mission report, produced by the IFEX-TMG is available from IFEX's website: <http://campaigns.ifex.org/tmg/TMGSept2005Report.doc>

IFLA Protests Crack Down of Intellectual Freedom in Tunisia

The following statement was issued by IFLA on 18 November 2005:

There can be no freedom of access to information without freedom of expression.

Participating in the World Summit on the Information Society (WSIS) in Tunisia, IFLA most strongly protests the abuses on intellectual freedom in the country. With deep concern we have witnessed the attempts by Tunisian authorities to silence journalists and human rights activists in the run up and during the summit. Human rights activists have been imprisoned and some are on hunger

strike. Journalists have been attacked, civil society meetings cancelled as a protest to the state of affairs. Information has been censored, newspapers banned and Web sites blocked.

IFLA supports the Tunisian Monitoring Group's (TMG) appeal to UN Secretary General Mr Kofi Annan "to call on the Tunisian authorities to end attacks on civil society and freedom of expression not only during this Summit, but beyond and to initiate an Office of the High Commissioner on Human Rights special investigation into the occurrences around the WSIS."

By its actions the host country has most regrettably demonstrated that it does not share the common vision of an Information Society for All adopted by the WSIS in Geneva in November 2003 and which is strongly supported by IFLA. That vision promotes an inclusive society in which everyone will be able to create, access, use and share information and knowledge. This means providing the opportunity for people to seek, receive and impart information and ideas without restriction, in accordance with Article 19 of the Universal Declaration of Human Rights. To achieve this goal, IFLA stresses the importance of removing any barriers to open access to information for all. Consequently,

IFLA once again urges the Tunisian government to remove barriers to open access to information for all its citizens.

IFLA restates its strong commitment to the fundamental human rights to know, learn and communicate without restriction.

IFLA urges the Government of Tunisia to respect human rights and remove the impediments to freedom of access to information, freedom of expression and freedom of association following the World Summit on the Information Society.

Sources:

Tunisian Monitoring Group (TMG): <http://www.campaigns.ifex.org/tmg>

World Association of Newspapers (WAN): <http://www.wan-press.org/recherche.php3?recherche=WSIS>

Amnesty International: <http://web.amnesty.org/library/Index/ENGMDE300192005>

IFEX: <http://www.ifex.org/>

Chinese Internet Regulations

The following statement was issued by IFLA on 25 October 2005:

Further to the media release dated July 13, 2005, the International Federation of Library Associations and Institutions (IFLA) Committee on Free Access to Information and Freedom of Expression (IFLA/FAIFE) condemns the latest actions of the Government of the People's Republic of China to limit freedom of access to information and freedom of expression on the Internet.

The Chair of the IFLA/FAIFE Committee Professor Paul Sturges says, the continuing moves by the Chinese government to control online information flow are an extremely worrying development that once again leaves Chinese Internet users unable freely to seek information from a full range of sources online in the interest of forming a balanced view. Updated regulations introduced on the 25th September 2005 have the potential to further stifle discussion in an online environment already under pressure from extensive government intervention. The Chinese government is proving itself to be resolutely committed to restricting its citizens' human rights in the online public sphere.

Updated Internet Regulations Cause Concern

Further to the implementation of new government regulations, it has been reported that China's 'e-police' are now actively involved in policing online discussions and

pre-empting political actions through active intervention in chat rooms.

The continuing restrictions imposed by the Government of the People's Republic of China detract from the potential of Internet technology, and restrict China's online population to a quasi Internet that effectively only disseminates information acceptable to the Government. Monitoring and control of the circulation of information online undermines the ideal of freedom of access to information and freedom of expression espoused in Article 19 of the Universal Declaration of Human Rights. Access to information, knowledge and lifelong learning is central to democratic development and active participation and influence in society as well as sustained economic development for the benefit of all sectors of society. A variety of opinions and experiences are vital

to healthy public discourse, and therefore limiting the online voices heard in China inhibits citizens' active participation in important global and internal discussions.

Complicity of Western Companies

IFLA calls attention to the active participation of Western computer companies in the Chinese government's actions, most notably the recent actions by Yahoo who provided information that allegedly led to the jailing of journalist Shi Tao for ten years. We ask that companies providing assistance to the government consider the effects of their actions on freedom of expression in the country. The attractions of the Chinese market must not overshadow the rights of Chinese citizens to form and disseminate their own opinions without fear of reprisal.

IFLA urges:

- The Government of the People's Republic of China to reconsider its attitudes towards the country's Internet users and to permit unhampered access to online information sources.
- Companies providing information technologies and information services in China to maintain the principles of freedom of access to information.

Contacts for the above statements:

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World Summit on the Information Society

Consensus And Commitment In Tunis

The second phase of the World Summit on the Information Society, held in Tunis from 16–18 November 2005, was attended by 19,401 participants, including 46 Heads of State and Government, Crown Princes and Vice-Presidents, 197 Ministers, Vice Ministers and Deputy Ministers, 5,857 participants representing 174 States and the European Community, 1,508 participants representing 92 international organizations, 6,241 participants representing 606 NGOs and civil society entities, 4,816 participants representing 226 business sector entities and 1,222 accredited journalists from 642 media organizations worldwide.

The Summit was convened in Tunis to tackle the problem of the digital divide and harness the potential of information and communication technologies (ICTs) to drive economic and social develop-

ment. Three key issues dominated the preparatory process leading to the Tunis Summit: Internet governance, financing strategies, and implementation mechanisms for the Action Plan developed by the first phase of WSIS, held in Geneva in 2003. The actions proposed in respect of these issues are set out in detail in the two Summit outcome documents – the *Tunis Commitment* and the *Tunis Agenda for the Information Society* – which were endorsed by world leaders at the closing plenary of the Summit, and which are available at <http://www.itu.int/wsis/implementation>

An important output of the Summit is the creation of a new Internet Governance Forum (IGF), to be convened by the UN Secretary-General, to foster and enable multi-stakeholder dialogue on public policy and development issues. The Forum is expected to be established in the first half of 2006, with an inaugural meeting to be hosted in Athens at the invitation of the Government of Greece. The IGF will have no

oversight function and will not replace existing arrangements, mechanisms, institutions or organizations. It will have no involvement in the day-to-day running and technical operation of the Internet.

Financing of the deployment of information and communication technology (ICT) is vital to meeting the Millennium Development Goals. For this reason, the output document welcomes the creation of the Digital Solidarity Fund and identifies areas where existing financing mechanisms could be improved, and where ICTs could be given a higher priority.

With regard to follow-up and implementation, the *Tunis Agenda for the Information Society* recognizes that it is now time to turn principles into actions. More than 2,500 projects were undertaken to bridge the digital divide between the first and second phases of WSIS, but the Tunis outputs clearly emphasize that more needs to be done. The General Assembly of the

United Nations, which has been asked to declare 17 May as World Information Society Day, will

conduct an overall review of the implementation of WSIS outcomes in 2015.

Source: ITU Press Release, 22 November 2005

Membership

New Members

We bid a warm welcome to the following 21 members who have joined the Federation between 22 October and 31 December 2005.

International Association

International Association of Agricultural Information Specialists (IAALD), United States

National Association

Association of Greek Librarians and Information Scientists, Greece

Institutions

Simon Fraser University Library, Canada

Bordeaux Business School Library, France

Stadtsbibliothek Hannover, Germany
Information Resource Centre, Adis International, New Zealand

Li Ka-shing Library, Singapore
Management University, Singapore

Kristianstad University Library, Sweden

Department of Computer and Information Sciences, University of Strathclyde, United Kingdom

University of Warwick Library, United Kingdom

Southern Methodist University, United States

University at Albany, State University of New York, United States

Pepperdine University Library, United States

Personal Affiliates

Ms Melida Busch, United States

Ms Rebecca Schneider, United States

Student Affiliates

Ms Helen Long, United States

Ms Cecilia I. Iwala, United States

Future IFLA Conferences

WLIC Seoul, Korea, 2006

The World Library and Information Congress, 71st IFLA General Conference, will be held in Seoul, Korea, from 20–24 August 2006. Congress sessions and related events which have been notified to *IFLA Journal* are listed below.

Shanghai Pre-Conference, 16–17 August 2006

Theme: Library management and marketing in a multicultural world

Hosts: IFLA Management and Marketing (M&M) Section; Shanghai Pudong New Area Government.

Organizers: Shanghai Library; Shanghai Pudong New Area Library; Shanghai Life Sciences Library, Chinese Academy of Sciences.

Special Supporter: Communication and Cooperation Committee, China Society for Library Science

English is the working language. Chinese-English simultaneous interpretation will be available during the Opening Ceremony. Registered participants are entitled to attend the Opening Ceremony of the 3rd Shanghai International Library Forum on August 17, 2006 free of charge. The theme of the Third SILF is 'Management Innovation and Library Services'.

Contact: Zhang Yijing, Shanghai Library. E-mail: yjzhang@libnet.sh.cn

IFLA Satellite Meeting: Scholarly Information on East Asia in the 21st Century

Organized by the Council on East Asian Libraries (CEAL) of the Association for Asian Studies. Sponsored by the IFLA Asia and Oceania Section (RSCAO), the Korean Library Association (KLA),

and the Korean Education and Research Information Service (KERIS).

Contacts: Philip Melzer. E-mail: pmel@loc.gov; Joy Kim. E-mail: joykim@usc.edu

Acquisitions & Collection Development and Serials Sections Joint Programme

Working title: Evolving business models for hybrid collections

Contact: Pentti Vattulainen (Mr), E-mail Pentti.Vattulainen@nrl.fi.

Asia and Oceania Section Open Session

Theme: Open access – promoting implementation in Asia and Oceania

Contact: Gary Gorman. E-mail: gary.gorman@vuw.ac.nz

Classification and Indexing Section Open Session

Theme: Interoperability of subject access for multilingual and multi-script networked environment, particularly for Asia

Contact: Patrice Landry. E-mail: Patrice.landry@slb.admin.ch

Continuing Professional Development and Workplace Learning Section, Preservation and Conservation Section and PAC Core Activity Joint Programme

Theme: Preservation advocacy and education

Contacts: PAC Section: Sarah Toulouse. E-mail: sarah.toulouse@bm-rennes.fr. CPDWL Section: Susan Schnuer. E-mail: schnuer@uiuc.edu. PAC Core activity: Marie-Thérèse Varlamoff. E-mail: marie-therese.varlamoff@bnf.fr

Document Delivery and Resource Sharing Section Open Session

Theme: Best practice in document delivery and resource sharing

Contact: Poul Erlandsen, Section Chair. E-mail: poer@dpu.dk

Education and Research Division VII

Theme: Hidden biases in library concepts – cultural and linguistic differences in research and education

Contact: Ragnar Audunson. E-mail: Ragnar.Audunson@jbi.hio.no

Education and Training Section Off-Site Whole Day Workshop

Themes: Regional cooperation

of LIS Education Institutes in East Asia; Education and lifelong learning among LIS teachers and educators

Contact: Mouna Benslimane. E-mail: moubens@yahoo.comGLH

Genealogy and Local History Section Open Session

Theme: Local history: a dynamic partnership of libraries, archives, and museums

Contact: Mel Thatcher. E-mail: thatchermp@gensocietyofutah.org

Libraries for the Blind Section Open Session

Theme: Accessible web pages and accessible OPACS

Contact: Helen Brazier. E-mail: helen.brazier@nlbuk.org

Library Buildings and Equipment Section Open Session

Theme: Libraries in multi-functional complexes: facilitating the sharing and exchange of learning, knowledge and information across different types of institution through synergy and design

Contact: Andrew Cranfield. E-mail: anc@horsholm.dk

National Libraries Section Open Session

Theme: National libraries: dynamic partners for the knowledge society

Contact: Ingrid Parent. E-mail: ingrid.parent@lac-bac.gc.ca

Public Libraries Section Open Session

Theme: Dynamic digitized

services with audio visual content

Contact: John Lake. E-mail: john.lake@corpoflondon.gov.uk

Regional Activities, Division VIII Open Session

Theme: Information literacy for the knowledge society

Contact: Gary Gorman. E-mail: gary.gorman@vuw.ac.nz

Rare Books and Manuscripts Section Open Session

Theme: West by East – East by West : cultural and technological exchange – old technology, new technology, collecting and describing rare materials

Contact: Jan Bos. E-mail: jan.bos@kb.nl

Reading Section and Libraries for Children and Young Adults Section Joint Session

Theme: Family reading

Contact: Gwynneth Evans. E-mail: gwynneth.evans@sympatico.ca

Reference and Information Services Section Open Session

Theme: Marketing reference services in today's library – on-site and virtual

Contact: Bodil Wöhnert. E-mail: bow@esbjergkommune.dk

School Libraries and Resource Centres Section Open Session

Theme: Information literacy for young people: evolving models in a changing world

Contact: James Henri. E-mail: jameshenri@hku.hk

Science and Technology Libraries Section Open Session

Theme: Workings of the ubiquitous library

Contact: Ray Schwartz. E-mail: schwartzr2@wpunj.edu

University Libraries and other General Research Libraries Section Open Session

Theme: The role of academic libraries in online and blended learning and teaching

Contact: Gillian McCombs. E-mail: gmccombs@smu.edu

Grants and Awards

ILIG Awards

Anthony Thompson Award

The Anthony Thompson Award is awarded by the International Library and Information Group of CILIP: Chartered Institute of Library and Information Professionals, UK.

The Anthony Thompson Award is aimed at a young librarian from a developing country who has not made a previous professional visit to UK. The winner is funded to visit UK for about a month. This year we are encouraging applicants from South or Central America, including the Caribbean, with an interest in health information.

Beca Anthony Thompson

La Beca Anthony Thompson es concedida por el International Library and Information Group, un grupo de profesionales interesados en temas internacionales, que forman parte de CILIP: el Colegio Oficial de Bibliotecarios y Profesionales de la Información del Reino Unido.

La Beca Anthony Thompson esta destinada a un nuevo profesional proveniente de un país en vías de desarrollo, que no haya tenido la oportunidad previa de viajar a Gran Bretaña en una visita de estudio. La beca dotará los fondos necesarios para realizar una visita profesional al Reino Unido de alrededor de un mes durante 2006. Este año son especialmente bienvenidas propuestas de jóvenes profesionales provenientes de Latinoamérica y el Caribe, con interés en información sobre la salud.

ILIG International Award

The ILIG International Award (for Making a Difference in Libraries and Information Services outside the UK) is a new annual prize which will be awarded to a person who has made a real difference to a community through their work in library and information services outside of the UK. Nominations should be made by ILIG members and the nominee can be of any nationality and need not be a professionally trained librarian.

Further information on both awards from: Diana Rosenberg, Secretary, ILIG, Roadways, The Ridge, Bussage, Stroud, Glos. GL6 8BB, UK. Tel/Fax: +44 1453 887214. E-mail: ilig@cilip.org.uk. Website: <http://www.cilip.org.uk/groups/ilig/introduction.html>.

Aquellos que requieran la información en español, pueden contactarme via correo electrónico: m.cotera@ucl.ac.uk.

IFLA Publications

Richtlinien für das Bibliothekswesen zur Unterstützung von Legasthenikern. By Gyda Skat Nielsen und Birgitta Irvall unter den Auspizien der Sektion der Bibliotheken für benachteiligte Personen. IFLA Professional Report No. 91. (Translation of the

IFLA Professional Report No. 70). 2005. ISBN 90-77897-06-2.

Guidelines for Library Services to Prisoners, 3rd Edition. By Vibeke Lehmann and Joanne Locke. IFLA Professional Report No. 92. (Revised edition of Professional

Report No. 46). 2005. ISBN 90-77897-07-0.

For more information on ordering these reports see: <http://www.ifla.org/V/pr/index.htm>.

From Other Organizations

Training in Belgium

STIMULATE = Scientific and Technological Information Management in Universities and Libraries: an Active Training Environment (Edition 6). Brussels, Belgium, October 2–December 21, 2006.

This program is aimed primarily at young scientists and professionals from developing countries with a university degree who are working in universities, information and documentation centers, and libraries, and who have a few years of practical experience.

The main aim is to offer a stimulating learning environment to the participants so as to sharpen their skills in collecting, storing, retrieving, presenting and managing information and to stimulate them to transfer their increased knowledge and skills to their colleagues and other stakeholders in their home countries. The language of instruction is English.

Specific objectives

- to provide participants with a clearer view on the importance of information in general and for their environment in particular, and on how to manage information: summarised: 'Management in libraries and information centers'
- to teach the participants to cope with modern technology, in view of the increasing importance of ICT; summarised: 'Information and communication technology for libraries and information centers'
- to guide them in retrieving information that is publicly accessible on an international scale: summarised: 'Information retrieval/searching'
- to teach them to store, organize, present, manage, publish information resources at personal, institutional, regional or national level: summarised: 'Information architecture'.

Contents of the Program

The sessions are organized in such a way that the first month is at introduction level, the second month at intermediate level, and the third month is at more advanced level. It

may make sense to participate during only one or two of the three months, depending on expertise.

The content of each training program depends on the availability of suitable expert lecturers from Belgium and from abroad. As soon as possible, the concrete schedule will be made available through the WWW site of the program. The following areas will be covered:

- Management in libraries and information centers
- Information and communication technology for libraries and information centers
- Information retrieval/searching
- Information architecture

In addition to the courses taking place at the university campus, study visits are organized.

Further information from: Website: <http://www.vub.ac.be/BIBLIO/itp/>. E-mail: stimulate@vub.ac.be. Fax +32 2 629 2693 (or 2282). Tel. +32 2 629 2629 or 32 2 629 2429 or 32 2 629 2609. Telex 61051 vubco-b. Postal address: STIMULATE-ITP, University Library, Vrije Universiteit Brussel, Pleinlaan 2, B-1050 Brussels, BELGIUM.

Other Publications

New Web Site for International Children's Digital Library

The web site for the International Children's Digital Library (ICDL) at www.icdlbooks.org has undergone a total redesign, with informative updates and enhanced functionality. The web interface is now available in Portuguese, bringing the count to ten interface languages including Arabic, Chinese, English, French, Filipino/Tagalog, German,

Hebrew, Persian/Farsi, and Spanish. There are more than 800 books in the collection, representing 43 countries and 32 languages. More than 500,000 unique visitors from 158 countries have accessed the ICDL to learn more about the project and view books in the collection.

Further information: Mary Ramos, ICDL Press Coordinator, University of Maryland, Human-Computer Interaction Lab. Tel. +1 301-405-4197. Fax: +1 301-314-9145. E-mail: icdl-info@cs.umd.edu

Renaissance Library Calendar 2006

The Renaissance Library Calendar 2006 features two libraries honoured with UNESCO awards in 2005. Biblioteca Palafoxiana, (the Palafoxiana Library) in Puebla, Mexico, dating from 1646, was listed on UNESCO's Memory of the World International Register in July, 2005. Also in July, the Plantin-Moretus Museum in Antwerp, Belgium, including its extensive library, dating from 1563, was

inscribed on the UNESCO World Heritage List. The twelve historic and beautiful libraries featured in the Renaissance Library Calendar 2006 are:

Lilienfeld Abbey Library, Lilienfeld, Austria, 1202

Library of the National Palace of Mafra, Mafra, Portugal, 1717

Library of Castilla-La Mancha, Borbón-Lorenzana room, Toledo, Spain, 1771

Library of the Francke Foundations, Halle, Germany, 1698

The Library Company of Philadelphia, Philadelphia, USA, 1731
The Casanatense Library, Rome, Italy, 1701

Artis Library, Amsterdam, The Netherlands, 1838

Canterbury Cathedral Library, Canterbury, UK, 597

The Library of the Plantin-Moretus Museum, Antwerpen, Belgium, 1563

Malatesta Library, Cesena, Italy, 1447

Palafoxiana Library, Puebla, Mexico, 1646

Trolleholm Castle Library, Svalöv, Sweden, late 18th century

Further information: Stuart Urwin, ISIM, Torsvagen 7b, 192 67 Sollentuna, Sweden. Tel. +46 8754 15 55. Fax: +46 8754 13 33, E-mail: stuart.urwin@isim.org. Copies of the calendar can be obtained at the Renaissance Library website: <http://www.renaissancelibrary.com/calendars.htm>

INTERNATIONAL CALENDAR

2006

4–7 April 2006. Singapore.
Asia-Pacific Conference on Library & Information Education & Practice (A-LIEP).
Theme: Preparing Information Professionals for Leadership in the New Age.
Further information: Christopher Khoo, School of Communication & Information, Nanyang Technological University, Singapore. E-mail: ASSGKHOO@ntu.edu.sg. Conference website: <http://www.ntu.edu.sg/sci/A-LIEP/>

April 5–7, 2006. Montréal, Québec, Canada.
Strips of Knowledge ~ Le savoir par la bande.
Further information: Olivier Charbonneau. E-mail: o.charbonneau@concordia.ca. Website: <http://www.blue-met-bleu.com/EN/index.asp?lasection=41>

25–28 April 2006. Çanakkale (Gallipoli), Turkey.
First Türk-ANZAC Research Libraries Conference. Johnnies and Mehments side by side: Collaborative application of technology in research and academic libraries.
Further information: <http://www.library.uq.edu.au/turk-anzac-conf2006/>

May 21–26, 2006. Nairobi, Kenya.
International Association of Agricultural Information Specialists (IAALD). *Theme:* Managing Agricultural Information for Sustainable Food Security

and Improved Livelihoods in Africa.

Further information: Dr. Joseph Kiplang, Moi University, School of Information Sciences, Department of Library, Records Management and Information Studies, PO Box 3900, Eldoret, Kenya. Tel. Mobile: +254–72222 3872. Office: 254–53–43620 Ex 333. Fax: 254–53–43047. E-mail: jkngetich@yahoo.co.uk

May 29–June 4 2006. Dubrovnik and Mljet, Croatia.
Libraries In The Digital Age (LIDA) 2006.
Course web site: <http://www.ffos.hr/lida/>; *Course e-mail:* lida@ffos.hr

24–26 June. New Orleans, LA, USA
2006 American Library Association Annual Conference.
Further information from: International Relations Office, American Library Association, 50 E. Huron Street, Chicago, IL 60611, USA. Tel. +1 312–280–3201. Fax: +1 312–280–4392. E-mail: intl@ala.org

16–17 August, 2006, Shanghai, China.
WLIC Pre-Conference: Library Management and Marketing in a Multicultural World.
Contact: Zhang Yijing, Shanghai Library. yjzhang@libnet.sh.cn

August 22–28, 2006. Seoul, Korea.
World Library and Information Congress: 72nd IFLA General Conference and Council.
Theme: Libraries: dynamic engines for the knowledge and information society.

For more information: IFLA Headquarters, POB 95312, 2509 CH, The Hague, The Netherlands. Tel. +31 70 314–0884. Fax: + 31 70 3834827. E-mail: IFLA@ifla.org. Website: <http://www.ifla.org/>

2007

2007. Durban, South Africa.
World Library and Information Congress: 73rd IFLA Council and General Conference.
Theme: Libraries for the future: progress, development and partnerships.
Further information from: International Federation of Library Associations and Institutions (IFLA), PO Box 95312, 2509 CH The Hague, Netherlands. Tel. +31 (70) 3140884. Fax: +31 (70) 3834827. E-mail: IFLA@ifla.org. Website: <http://www.ifla.org/>

2008

August 10–14, 2008, Québec, Canada.
World Library and Information Congress: 74th IFLA General Conference and Council.
Further information from: International Federation of Library Associations and Institutions (IFLA), PO Box 95312, 2509 CH The Hague, Netherlands. Tel. +31 (70) 3140884. Fax: +31 (70) 3834827. E-mail: IFLA@ifla.org. Website: <http://www.ifla.org/>

SOMMAIRES

Unni Knutsen. **Bibliographic Control in the Nordic Countries. [Le contrôle bibliographique dans les pays nordiques.]**
IFLA Journal 32 (2006) No. 1, pp. 5–12

Cet article décrit la situation de la législation sur le dépôt légal et les bibliographies nationales dans les pays nordiques, et s'intéresse en particulier aux ressources électroniques à distance. Il traite de l'utilisation de normes internationales au sein de la communauté bibliothécaire scandinave ainsi que de projets ou de domaines de coopération spécifiques.

Mots clés: Contrôle bibliographique; Pays nordiques

Margaret E.S. Forrest. **Towards an Accessible Academic Library: using the IFLA Checklist. [Vers une bibliothèque universitaire accessible: l'usage de la liste de contrôle de l'IFLA.]**
IFLA Journal 32 (2006) No. 1, pp. 13–18

Décrit et analyse les expériences obtenues avec l'application de la liste de contrôle de l'IFLA sur l'accès des personnes handicapées à une bibliothèque universitaire : celle du campus de Fife, à l'école d'infirmières et de sages-femmes de l'Université de Dundee en Écosse. Une introduction à la législation sur les personnes handicapées au Royaume-Uni fournit le cadre de référence légal de cet article. Au Royaume-Uni, cette législation a été reconnue comme un point important pour inciter les bibliothèques à améliorer leurs services aux personnes handicapées. Cet article examine un certain nombre d'obstacles physiques et comportementaux aux bonnes pratiques et l'intérêt d'utiliser la liste de contrôle de l'IFLA pour surmonter certains de ces obstacles.

Mots clés: Personnes handicapées; Accès aux bibliothèques; Bibliothèques universitaires, Écosse

Roger Evans. **Delivering Sizzling Services and Solid Support with**

Open Source Software. [Fournir des services de qualité et un soutien solide avec des logiciels libres.]
IFLA Journal 32 (2006) No. 1, pp. 19–27

Donne une vue d'ensemble des services basés sur des logiciels libres à la Bibliothèque Publique d'Oslo et élabore un plan de coopération internationale entre les bibliothèques afin de fournir Linux de façon personnalisée aux bibliothèques modelées sur le projet norvégien 'Skolelinux'. Deichmanske Bibliotek/la Bibliothèque Publique d'Oslo utilise le logiciel libre LAMP (Linux, Apache, MySQL, PHP) aussi bien pour le soutien administratif que comme plateforme pour des serveurs fournissant des services multimédias particulièrement séduisants à son public cible. Si des logiciels propriétaires avaient été utilisés, les coûts auraient été considérablement plus élevés et auraient été prohibitifs dans la plupart des cas, de sorte que les projets n'auraient jamais pu être réalisés. Sur les ordinateurs clients, la combinaison des logiciels libres constituant LOOM (Linux, Open Office, Mozilla) a permis à la bibliothèque d'installer bien plus d'ordinateurs publics que cela n'aurait été possible avec une plateforme de logiciels propriétaires.

Mots clés: Logiciels libres; Bibliothèque Publique d'Oslo

Brinley Franklin and Terry Plum. **Successful Web Survey Methodologies for Measuring the Impact of Networked Electronic Services (MINES for Libraries). [Succès des méthodologies de sondage en ligne pour mesurer l'impact des services électroniques en réseau (sondage MINES pour les bibliothèques).]**
IFLA Journal 32 (2006) No. 1, pp. 28–40

Le sondage MINES pour les bibliothèques est une méthode de sondage en ligne qui s'est révélée valable et fiable pour évaluer l'usage des ressources électroniques en réseau. Cette méthodo-

logie a permis de rassembler des données d'utilisation sur les ressources électroniques des bibliothèques, y compris revues et livres électroniques, bases de données, catalogue en ligne et services tels que prêts entre bibliothèques. Elle peut aussi intégrer des données sur des ressources ne nécessitant pas d'inscription, par exemple collections numériques, revues librement accessibles, serveurs de prépublication et de post-impression ainsi que dépôts institutionnels. Cette méthode de sondage en ligne a plus de succès dans les bibliothèques qui ont mis en place une infrastructure d'évaluation du réseau. Afin d'illustrer son utilité, l'article expose une vue d'ensemble de la méthodologie, une discussion des infrastructures d'évaluation et des résultats récents des sondages MINES pour les bibliothèques dans plus de 30 universités d'Amérique du Nord au cours de ces deux dernières années, y compris bibliothèques des sciences de la santé, grandes bibliothèques universitaires et consortium canadien de facultés et d'universités.

Mots clés: Ressources électroniques; Usage; Sondages; Web; sondage MINES pour les bibliothèques

GladysAnn Wells and Richard Pearce-Moses. **From Bibliographer to Curator: archival strategies for capturing web publications. [De bibliothécaire à conservateur: stratégies d'archivage pour recueillir les publications sur le Web.]**
IFLA Journal 32 (2006) No. 1, pp. 41–47

Bibliothécaires, archivistes et responsables de dossiers ne peuvent plus se contenter d'être les récepteurs passifs de ce que leur ont fourni des programmes souvent vénérables, mais doivent savoir recueillir activement les informations requises pour le futur. Étant donné la quantité de matériel disponible sur les sites Internet des organismes gouvernementaux, les méthodes traditionnelles de contrôle bibliographique par article

ne sont pas pratiques. Un modèle conçu en Arizona pour conserver une collection de publications sur le Web selon les principes d'archivage de la provenance et de l'ordre d'origine est issu de la constatation comme quoi l'organisation des sites Web fonctionne parallèlement à celle des collections d'archives. Ce modèle s'intéresse aux fonctions bibliothécaires traditionnelles d'identification et de sélection, d'acquisition, de description, de référence et d'accès. Il suggère comment tirer parti de la perspective de l'archiviste pour adapter ces fonctions aux besoins du 21^e siècle.

Mots clés: Publications sur le Web; Archives; Bibliothèques; Gestion des dossiers

Elisabeth Tallaksen Rafste, Tove Pemmer Sætre and Ellen Sundt. **Norwegian Policy for Empowering School Libraries. [Politique norvégienne en vue d'affermir la position des bibliothèques scolaires.]**

IFLA Journal 32 (2006) No. 1, pp. 48–53

La première partie de cet article présente une image globale des bibliothèques scolaires en Norvège, examine des statistiques, aborde la législation sur les écoles et les bibliothèques et met en lumière certains aspects du programme d'enseignement pour les écoles primaires et secondaires. Cet examen

illustre la complexité des systèmes intégrés dans lesquels se trouvent les bibliothèques scolaires et révèle les obstacles empêchant de maintenir et de développer avec succès les bibliothèques scolaires en Norvège, les ponts à franchir et les mesures à prendre. La seconde partie se fonde sur le projet « Accorder une place à la lecture : pour une stratégie visant à stimuler les capacités de lecture et le plaisir de lire, 2003 à 2007 » pour illustrer comment les systèmes politiques, éducatifs et bibliothécaires peuvent joindre leurs forces afin d'affermir la position des bibliothèques scolaires et de stimuler les aptitudes et l'intérêt pour la lecture. Il examine certains des projets et évalue la participation des différentes parties en présence, l'avancée du projet et les résultats préliminaires. Enfin, il attire l'attention sur les défis futurs pour les bibliothèques scolaires en Norvège.

Mots clés: Bibliothèques scolaires; Norvège

Chris Watts and Ijeoma Ibegbulam. **Access to Electronic Healthcare Information Resources in Developing Countries: experiences from the Medical Library, College of Medicine, University of Nigeria. [L'accès aux ressources électroniques d'information de santé dans les pays en voie de développement: expérience de la bibliothèque médicale de la**

faculté de médecine de l'Université du Nigeria.]

IFLA Journal 32 (2006) No. 1, pp. 54–61

Cet article présente les résultats d'une étude préliminaire sur la situation de l'accès aux informations électroniques de santé dans les pays en voie de développement, en particulier sur la situation à la bibliothèque médicale de la faculté de médecine de l'Université du Nigeria. Une étude de la littérature actuelle examine des questions plus vastes concernant l'accès aux informations électroniques dans les pays en voie de développement et des questions spécifiques ayant trait aux informations électroniques de santé. Il identifie certaines études spécialement axées sur la situation au Nigeria. Des informations rassemblées au cours d'une série d'entretiens avec le bibliothécaire de la bibliothèque médicale permettent d'identifier un certain nombre de problèmes, y compris le manque d'une infrastructure informatique et d'un accès à Internet abordables, et la nécessité pour le personnel et les usagers de la bibliothèque d'acquérir des aptitudes informatiques et des aptitudes de recherche d'informations. Les domaines pour poursuivre ces recherches sont identifiés.

Mots clés: Informations sur la santé; Sources électroniques d'information; Accès; Nigeria; Université du Nigeria

ZUSAMMENFASSUNGEN

Unni Knutsen. **Bibliographic Control in the Nordic Countries [Bibliographische Lenkung in den nordischen Ländern].**

IFLA Journal 32 (2006) No. 1, pp. 5–12

Dieser Beitrag beschreibt den Status der gesetzlichen Vorgaben zur Speicherung von Veröffentlichungen und geht dabei auch auf die nationalen Bibliographien in den nordischen Ländern ein, wobei der Schwerpunkt speziell auf den ortsfernen elektronischen

Ressourcen liegt. Der Text befasst sich mit der Verwendung internationaler Standards im nordischen Bibliothekswesen und beschreibt zudem spezifische Projekte beziehungsweise Kooperationsbereiche. **Schlüsselbegriffe:** Bibliographische Lenkung; nordische Länder

Margaret E.S. Forrest. **Towards an Accessible Academic Library: using the IFLA Checklist [In Richtung einer zugänglichen akademischen Bibliothek: die Nutzung der IFLA-Checkliste].**

IFLA Journal 32 (2006) No. 1, pp. 13–18

Die Autorin beschreibt und analysiert die Erfahrungen mit der Anwendung der IFLA-Checkliste, insbesondere auch im Hinblick auf die Zugänglichkeit von Unibibliotheken für invalide Personen. Als Beispiel dient die Fife Campus Library der School of Nursing und Midwifery an der University of Dundee in Schottland. Eine Einführung in die Invalidengesetze in Großbritannien steckt den juristi-

schen Rahmen dieses Beitrags ab. In Großbritannien gelten die Invalidegesetze bekanntlich als deutlicher Anlass für die Bibliotheken, ihre Dienstleistungen für mindervalide Personen zu verbessern. Der vorliegende Beitrag bespricht eine Reihe physischer und psychischer Barrieren, die der optimalen Verwirklichung dieser Ideen entgegenstehen und unterstreicht den Wert der IFLA-Checkliste bei der Überwindung einiger dieser Schwierigkeiten.

Schlüsselbegriffe: Mindervalide Personen; Bibliothekszugang; Unibibliotheken; Schottland

Roger Evans. **Delivering Sizzling Services and Solid Support with Open Source Software [Das Angebot großartiger Dienstleistungen und einer soliden Unterstützung mit Open Source-Software].**

IFLA Journal 32 (2006) No. 1, pp. 19–27

Dieser Artikel bietet einen Überblick über die Open Source-Dienstleistungen der öffentlichen Bibliothek Oslo und beschreibt einen Plan zur internationalen Kooperation zwischen den einzelnen Bibliotheken, um eine maßgeschneiderte Linux-Ausstattung der Bibliotheken nach dem Modell des norwegischen „Skolelinux“-Projekts zu realisieren. Die Deichmanske Bibliotek/ die öffentliche Bibliothek in Oslo hat die Open Source LAMP (Linux, Apache, MySQL, PHP) für Office Support wie auch als Plattform für Server verwendet, die dem Zielpublikum einen hervorragenden Multimedia-Service bieten. Hätte man dazu geschützte Software verwendet, dann wären die Kosten sehr viel höher und das Vorhaben in den meisten Fällen ohnehin viel zu teuer gewesen, so dass die Projekte niemals hätten realisiert werden können. Auf den kundenseitigen Computern hat die Bibliothek dank der LOOM-Kombination aus Open Source – Produkten (Linux, Open Office, Mozilla) sehr viel mehr öffentlich zugängliche Computer installieren können, als das mit einer geschützten Plattform möglich gewesen wäre.

Schlüsselbegriffe: Open Source Software; öffentliche Bibliothek Oslo

Brinley Franklin und Terry Plum. **Successful Web Survey Methodologies for Measuring the Impact of Networked Electronic Services (MINES for Libraries) [Erfolgreiche Web Survey – Methoden zur Messung des Einflusses vernetzter elektronischer Dienstleistungen].** IFLA Journal 32 (2006) No. 1, pp. 28–40

MINES for Libraries, eine web-basierte Survey-Methode, ist – so hat sich gezeigt – ein valides und verlässliches Verfahren zur Bewertung der Nutzung vernetzter elektronischer Ressourcen. Mithilfe dieses Verfahrens wurden Nutzungsdaten bezüglich der elektronischen Ressourcen von Bibliotheken gesammelt, einschließlich elektronischer Fachzeitschriften, E-Bücher, Datenbanken, Online-Katalogen sowie Dienstleistungen wie beispielsweise im Zusammenhang mit dem auswärtigen Leihverkehr. Damit lassen sich ebenfalls Daten über nicht abonnementgebundene Ressourcen integrieren, wie beispielsweise digitale Sammlungen, Open Access-Fachzeitschriften, Preprint- und Postprint-Server sowie institutionelle Speicherbibliotheken. Diese Web Survey-Methode ist in Bibliotheken erfolgreicher, die eine Infrastruktur zur Netzwerkbewertung implementiert haben. Um den Nutzen zu verdeutlichen, folgt ein Überblick über das Verfahren und eine Besprechung der Infrastrukturen zur Bewertung; zudem werden neuere MINES-Ergebnisse für Bibliotheks-Surveys an über 30 nordamerikanischen Universitäten in den letzten zwei Jahren vorgestellt. Dabei geht es auch um gesundheitswissenschaftliche Bibliotheken, Uni-Hauptbibliotheken sowie einen Bibliothekenverband im Rahmen der Zusammenarbeit diverser Colleges und Universitäten in Kanada.

Schlüsselbegriffe: Elektronische Ressourcen; Verwendung; Surveys; World Wide Web; MINES for Libraries

GladysAnn Wells und Richard Pearce-Moses. **From Bibliographer to Curator: archival strategies for capturing web publications [vom Bibliographen zum Kurator: Archivierungsstrategien zur Speicherung von Web-Publikationen].** IFLA Journal 32 (2006) No. 1, pp. 41–47

Bibliothekare, Archivare sowie Archivleiter können sich nicht länger auf ihre Rolle als passive Empfänger von Materialien beschränken, die sie im Rahmen häufigbeeindruckender Programme erhalten haben. Vielmehr müssen sie sich nun aktiv um die Informationen bemühen, die in der Zukunft benötigt werden. Angesichts des großen Umfangs an Materialien über Websites der Regierungsbehörden wären traditionelle, nach Einträgen strukturierte Verfahren zur bibliographischen Lenkung denkbar ungeeignet. Ein in Arizona entwickeltes Modell zur Verwaltung einer Sammlung von Webveröffentlichungen auf Basis der Archivierungsprinzipien nach Herkunft und gemäß der ursprünglichen Ordnung ist aus der Beobachtung erwachsen, dass die Organisation von Websites der Organisation von Archivsammlungen ähnelt. Das Arizona-Modell spricht traditionelle Bibliotheksfunktionen, wie Identifizierung und Selektion, Akquisition, Beschreibung, Verweis und Zugang, an. Der Text beschreibt, in welcher Weise die Perspektive der Archivare dazu beitragen kann, diese Funktionen so anzupassen, dass sie den Anforderungen des 21. Jahrhunderts gerecht werden.

Schlüsselbegriffe: Web-Publikationen; Archive; Bibliotheken; Archivverwaltung

Elisabeth Tallaksen Rafste, Tove Pemmer Sætre und Ellen Sundt. **Norwegian Policy für Empowering School Libraries [Die norwegische Strategie zum Empowerment von Schulbibliotheken].**

IFLA Journal 32 (2006) No. 1, pp. 48–53

Im ersten Teil dieses Beitrags vermitteln die Autorinnen einen

allgemeinen Eindruck von den Schulbibliotheken in Norwegen, wobei auch Statistiken hinzugezogen werden. Dabei werden die gesetzlichen Rahmenbedingungen für norwegische Schulen und Bibliotheken umrissen und gewisse Aspekte des nationalen Curriculums für Grundschulen und weiterführende Schulen hervorgehoben. Zudem beleuchtet der Text die komplexen, integrierten Systeme, innerhalb derer die Schulbibliotheken operieren, und betrachtet auch Aspekte, die der erfolgreichen Aufrechterhaltung und Entwicklung der Schulbibliotheken in Norwegen im Weg stehen. Dabei müssen gewisse Brücken geschlagen und geeignete Maßnahmen ergriffen werden. Im zweiten Teil des Beitrags geht es um den Plan „Platz zum Lesen schaffen: eine Strategie zur Förderung der Lesefähigkeit und der Freude am Lesen 2003-2007“. Damit wird aufgezeigt, in welcher Weise sich die politischen Systeme, die Ausbildungssysteme und Bibliothekssysteme kombinieren lassen, um Schulbibliotheken eigenständiger zu machen und die Lesefähigkeit sowie das Interesse am Lesen zu fördern. Es folgt eine Betrachtung einiger Projekte, die speziell darauf ausgerichtet sind, wobei auch der Beitrag unter-

schiedlicher Parteien gewürdigt wird und der Projektfortschritt sowie die vorläufigen Ergebnisse beschrieben werden. Abschließend kommen die zukünftigen Herausforderungen für die Schulbibliotheken in Norwegen zur Sprache.

Schlüsselbegriffe: Schulbibliotheken; Norwegen

Chris Watts und Ijeoma Ibegbulam. **Access to Electronic Healthcare Information Resources in Developing Countries: experiences from the Medical Library, College of Medicine, University of Nigeria [Zugang zu den elektronischen Informationsquellen zur Gesundheitsfürsorge in Entwicklungsländern: Erfahrungswerte aus der Medical Library des College of Medicine an der Universität von Nigeria].**

IFLA Journal 32 (2006) No. 1, pp. 54-61

In diesem Beitrag präsentieren die Autoren die Ergebnisse einer vorläufigen Studie, wobei es um die Zugänglichkeit elektronischer Informationen über die Gesundheitsfürsorge in Entwicklungsländern ging, und gehen dabei schwerpunktmäßig auf die Bedingungen in der medizinischen

Bibliothek des College of Medicine an der Universität von Nigeria ein. Eine Übersicht über die aktuelle Literatur stellt den Zugang zu den elektronischen Informationen in den Entwicklungsländern in einen breiteren Zusammenhang; zudem werden auch spezifische Fragen bezüglich der elektronischen Informationen über die Gesundheitsfürsorge angesprochen. Zudem geht es in diesem Beitrag um Studien, die sich speziell auf die Situation in Nigeria beziehen. Aus Informationen, die sich aus einer Reihe von Interviews mit dem Bibliothekar der medizinischen Bibliothek ergeben haben, werden gewisse Themen herauskristallisiert, wie zum Beispiel das Fehlen einer adäquaten ICT-Infrastruktur und eines bezahlbaren Online-Zugangs. Dabei ergibt sich die Notwendigkeit für die Mitarbeiter wie auch die Nutzer der Bibliothek, sich die nötigen ICT-Fähigkeiten selbständig anzueignen und zu lernen, wie man Informationen gezielt sucht und findet. Abschließend werden dann auch zukünftige Forschungsgebiete spezifiziert.

Schlüsselbegriffe: Informationen über die Gesundheitsfürsorge; elektronische Informationsquellen; Zugang; Nigeria; Universität von Nigeria

RESÚMENES

Unni Knutsen. **Bibliographic Control in the Nordic Countries. [Control bibliográfico en los países nórdicos.]**

IFLA Journal 32 (2006) No. 1, pp. 5-12

En este documento se describe el estado de la legislación de depósitos legales y de las bibliografías nacionales en los países nórdicos, incidiendo especialmente en los recursos electrónicos remotos. Se describe el uso de estándares internacionales en la comunidad bibliotecaria nórdica así como los proyectos específicos y las áreas de cooperación.

Palabras clave: Control bibliográfico; países nórdicos

Margaret E.S. Forrest. **Towards an Accessible Academic Library: using the IFLA Checklist. [Hacia una biblioteca académica accesible: utilización de la lista de comprobación de IFLA]**

IFLA Journal 32 (2006) No. 1, pp. 13-18

Describe y analiza la experiencia de aplicar la lista de comprobación de IFLA; acceso a bibliotecas académicas de personas con discapacidades: La Biblioteca del Fife Campus de la Escuela de Enfermería y Obstetricia, Universidad de Dundee, Escocia. Una introducción a la legislación sobre discapacidad en el Reino Unido constituye el marco legal

de este documento. En el Reino Unido, esta legislación ha sido reconocida como un importante incentivo para que las bibliotecas mejoren los servicios prestados a personas discapacitadas. En este documento se tienen en cuenta una serie de barreras físicas y de actitud, así como la utilidad que reporta el uso de la Lista de comprobación de IFLA para superar algunas de estas barreras.

Palabras clave: Personas discapacitadas; Acceso a bibliotecas; Bibliotecas académicas; Escocia

Roger Evans. **Delivering Sizzling Services and Solid Support with Open Source Software. [Provisión de los servicios más modernos y**

una asistencia eficaz con software de código abierto.]

IFLA Journal 32 (2006) No. 1, pp. 19-27

Ofrece una visión general de los servicios basados en código abierto ofrecidos por la Biblioteca Pública de Oslo y traza un plan para la cooperación internacional entre bibliotecas destinado a crear una distribución Linux personalizada para bibliotecas basada en el proyecto noruego "Skolelinux". Deichmanske Bibliotek/ La Biblioteca Pública de Oslo ha utilizado el LAMP de código abierto (Linux, Apache, MySQL, PHP) tanto para ofrecer asistencia administrativa como a modo de plataforma para servidores, proporcionando interesantes servicios multimedia a sus usuarios. Si se hubiera utilizado un software patentado, los costes hubieran sido significativamente más altos y, en la mayoría de los casos, prohibitivos, de manera que los proyectos nunca se hubieran llevado a cabo. En los ordenadores de los clientes, la combinación LOOM de productos de código abierto (Linux, Open Office, Mozilla) ha permitido a la biblioteca instalar muchos más ordenadores públicos de lo que hubiera sido posible de haberse usado una plataforma patentada.

Palabras clave: Software de código abierto; Biblioteca Pública de Oslo

Brinley Franklin y Terry Plum. Successful Web Survey Methodologies for Measuring the Impact of Networked Electronic Services (MINES for Libraries). [Metodologías eficaces de realización de encuestas basadas en web destinadas a medir el efecto de los servicios electrónicos en red (MINES for Libraries).]

IFLA Journal 32 (2006) No. 1, pp. 28-40

MINES for Libraries es una metodología de realización de encuestas basadas en web que se está erigiendo como un método válido y fiable para evaluar el uso de recursos electrónicos en red. La metodología ha recopilado datos de uso sobre los recursos electrónicos de

las bibliotecas, entre ellos revistas electrónicas, libros electrónicos, bases de datos, el catálogo on-line y servicios tales como el préstamo inter-bibliotecario. También puede integrar datos sobre recursos no relacionados con la suscripción, como colecciones digitales, revistas de acceso libre, servidores previos y posteriores a la impresión y depósitos institucionales. Este método de realización de encuestas basadas en web es más eficaz en las bibliotecas que han implantado una infraestructura de valoración de redes. Para ilustrar su utilidad, se presenta una visión general de la metodología, un debate sobre infraestructuras de valoración y los resultados recientes de encuestas MINES for Libraries realizadas en más de 30 universidades norteamericanas durante los dos últimos años, incluyendo bibliotecas de ciencias de la salud, las principales bibliotecas académicas y el consorcio de bibliotecas canadienses de escuelas universitarias y universidades.

Palabras clave: Recursos electrónico; Uso; Encuestas; World Wide Web; MINES for Libraries

Gladys Ann Wells y Richard Pearce-Moses. From Bibliographer to Curator: archival strategies for capturing web publications. [De bibliógrafo a conservador: estrategias archivísticas para capturar publicaciones web.]

IFLA Journal 32 (2006) No. 1, pp. 41-47

Los bibliotecarios, archivistas y gestores de registros ya no pueden seguir siendo receptores pasivos de todo lo recibido a través de programas venerables, sino que deben capturar activamente la información que necesitan en el futuro. Dada la cantidad de material alojado en los sitios web de los organismos públicos, los métodos tradicionales de control bibliográfico han quedado obsoletos. Un modelo de Arizona para conservar una colección de publicaciones web basado en los principios archivísticos de procedencia y orden original nació de la observación de que la organización de los sitios web es similar

a la organización de colecciones archivísticas. El Modelo Arizona aborda las funciones bibliotecarias tradicionales de identificación y selección, adquisición, descripción, referencia y acceso. Indica el modo en que una perspectiva archivística puede ayudar a adaptar estas funciones a las necesidades del siglo XXI.

Palabras clave: Publicaciones web; Archivos; Bibliotecas; Gestión de registros

Elisabeth Tallaksen Rafste, Tove Pemmer Sætre y Ellen Sundt. Norwegian Policy for Empowering School Libraries. [Política noruega para conferir poderes a las bibliotecas escolares.]

IFLA Journal 32 (2006) No. 1, pp. 48-53

En la primera parte de este documento se presenta una panorámica general de las bibliotecas escolares en Noruega, con revisión de estadísticas, resumen de la legislación sobre colegios y bibliotecas e indicación de aspectos del currículum nacional para escuelas de educación primaria y secundaria. Ilustra los sistemas complejos e integrados en los que se encuentran las bibliotecas escolares y estudia los obstáculos que impiden el buen mantenimiento y desarrollo de bibliotecas escolares en Noruega, los puentes que han de cruzarse y las medidas que se han de tomar. En la segunda parte se usa el plan "Hacer sitio para la lectura; estrategia para estimular las habilidades lectoras y la alegría de leer 2003-2007" para ilustrar el modo en que los sistemas político, educativo y bibliotecario pueden unir sus fuerzas para conferir poderes a las bibliotecas escolares y estimular las habilidades lectoras y el interés por la lectura. También se centra en algunos proyectos y evalúa las aportaciones de distintas partes, el proceso del proyecto y los resultados preliminares. Por último, llama la atención sobre futuros retos que habrán de afrontar las bibliotecas escolares de Noruega.

Palabras clave: Bibliotecas escolares; Noruega

Chris Watts y Ijeoma Ibegbulam. **Access to Electronic Healthcare Information Resources in Developing Countries: experiences from the Medical Library, College of Medicine, University of Nigeria.** [Аcesso a recursos electrónicos de información sobre atención sanitaria en países en vías de desarrollo: experiencias de la Biblioteca médica, Facultad de Medicina, Universidad de Nigeria.]

IFLA Journal 32 (2006) No. 1, pp. 54–61

En este documento se presentan los resultados de una investigación preliminar sobre la situación

relacionada con el acceso a información electrónica sobre atención sanitaria en países en vías de desarrollo, centrándose en la experiencia concreta de la Biblioteca médica de la Facultad de Medicina de la Universidad de Nigeria. Una revisión de la bibliografía actual se centra en asuntos más generales en relación con el acceso a información electrónica en los países en vías de desarrollo y en temas concretos relacionados con la información electrónica sobre atención sanitaria. Se identifican los estudios que se centran concretamente en la situación en Nigeria. La información recopilada de una serie de

entrevistas con el bibliotecario de la Biblioteca médica pone de relieve una serie de asuntos, entre ellos la carencia de una infraestructura ICT adecuada y de acceso asequible a Internet y la necesidad de que tanto el personal de la biblioteca como los usuarios de la misma adquieran los conocimientos necesarios para buscar y manejar información online. Asimismo, se ponen de relieve las áreas que necesitan más investigación.

Palabras clave: Información sobre atención sanitaria; Fuentes de información electrónica; Acceso; Nigeria; Universidad de Nigeria.

Рефераты статей

[Unni Knutsen. **Bibliographic Control in the Nordic Countries.** [Унни Кнутсен. **Библиографический учет в странах Северной Европы.**]

Журнал ИФЛА 32 (2006) № 1, стр. 5–12

В статье описано состояние законодательства об обязательном экземпляре и национальной библиографии в странах Северной Европы с основным упором на удаленные электронные ресурсы. Использование международных стандартов в североευропейском библиотечном сообществе описано как на примере конкретных проектов, так и кооперативных проектов.

Ключевые слова: Библиографический учет; страны Северной Европы

Margaret E.S. Forrest. **Towards an Accessible Academic Library: using the IFLA Checklist.** [Маргарет Е.С. Форест. **Повышая доступность университетской библиотеки: использование контрольного списка [книг и журналов] ИФЛА.**]

Журнал ИФЛА 32 (2006) № 1, стр. 13–18

Автор описывает и анализирует применение перечня ИФЛА, предназначенного для повышения уровня доступности библиотек для лиц с ограниченными возможностями к ресурсам университетской библиотеки на примере библиотеки

пяти кампусов Школы среднего медицинского персонала акушерства и Университета Данди (University of Dundee) в Шотландии. Правовые рамки этой статьи основаны на законах Великобритании, относящихся к правам инвалидов и лиц с ограниченными возможностями. Для библиотек Великобритании ввод в действие подобного законодательства признан важным стимулом повышения уровня обслуживания библиотек инвалидов и лиц с ограниченными возможностями.

В статье рассматривается ряд барьеров физического и нравственного свойства, мешающих достижению лучшего качества обслуживания, а также ценность использования перечня ИФЛА для преодоления некоторых из них.

Ключевые слова: Инвалиды, лица с ограниченными возможностями пользования библиотекой; Доступ в библиотеки; Университетские библиотеки; Шотландия

Roger Evans. **Delivering Sizzling Services and Solid Support with Open Source Software.** [Роджер Эванс. **Предоставление новых услуг и прочной поддержки с помощью программных продуктов с открытыми кодами.**]

Журнал ИФЛА 32 (2006) № 1, стр. 19–27

Дается обзор информационных услуг, предоставляемых на основе программных продуктов с открытыми кодами, предоставляемых публичной библиотекой города Осло, а также представление о планах международного сотрудничества между библиотеками для производства и распространения адаптированных программных продуктов, основанных на Linux, для библиотек, объединенных норвежским проектом моделирования «Skolelinux». В публичной библиотеке города Осло – Дейхманской библиотеке (Deichmanske Bibliotek) программный продукт с открытым кодом LAMP (Linux, Apache, MySQL, PHP) используется как для обеспечения технического обслуживания, так и в качестве основной системы для серверов, обеспечивающих посетителей новейшим информационным мультимедийным сервисом. Использование патентованного программного обеспечения повлекло бы за собой значительное увеличение затрат, что привело бы, в большинстве случаев, к невозможности реализации проектов. Что касается компьютеров, предназначенных для посетителей, использование открытого программного обеспечения в комбинации LOOM (Linux), Open Office, Mozilla позволило библиотеке установить намного больше компьютеров

публичного использования, чем это было бы возможно при установке патентованного программного обеспечения.

Ключевые слова: Программное обеспечение с открытым кодом; Публичная библиотека города Осло

Brinley Franklin and Terry Plum. **Successful Web Survey Methodologies for Measuring the Impact of Networked Electronic Services (MINES for Libraries).** [Бринли Фрэнклин и Терри Плам. **Успешные методики сетевого наблюдения, используемые для измерения влияния электронно-сетевых услуг (MINES для библиотек).**] Журнал ИФЛА 32 (2006) № 1, стр. 28–40

Методика MINES представляет собой методику сбора данных на основе сетевой технологии, доказавшей свою действенность и надежность при оценке использования сетевых электронных ресурсов. Эта методика основана на сборе данных по использованию библиотечных электронных ресурсов, в том числе, электронных журналов, электронных книг, баз данных, электронных каталогов и услуг по межбиблиотечному абонементу. Она также позволяет объединять сведения по использованию иных (полученных не по подписке) ресурсов, таких как коллекции материалов в оцифрованном виде, журналы открытого доступа, серверы, на которых хранятся препринты и постпринты, и ресурсы, размещенные в институциональных репозиториях. Настоящая методика в наибольшей степени реализована в библиотеках, внедривших сетевую инфраструктуру для оценки ресурсов. В качестве иллюстрации эффективности метода приведен анализ использования методики, а также оценка различных инфраструктуры и недавние результаты применения методики MINES в библиотеках, осуществленные за последние два года более 30 университетами Северной Америки, включая Канадский консорциум библиотек колледжей и университетов.

Ключевые слова: Электронные ресурсы; Использование; Обзоры;

Всемирная сеть Интернета; MINES для библиотек

GladysAnn Wells and Richard Pearce-Moses. **From Bibliographer to Curator: archival strategies for capturing web publications.** [Глэдис-Энн Уэлс и Ричард Пирс-Мозес. **От библиографов к кураторам: стратегии архивирования для сбора сетевых публикаций.**] Журнал ИФЛА 32 (2006) № 1, стр. 41–47

Библиотекари, архивисты и делопроизводители не могут оставаться пассивными получателями материалов, поступающих к ним зачастую с помощью устаревшего программного обеспечения, но должны превратиться в активных сборщиков информации, необходимой в будущем.

Принимая во внимание рост материалов на веб-сайтах правительственных агентств, отмечается, что традиционные методы библиографического учета документов становятся непрактичными. Аризонская модель комплектования коллекции сетевых публикаций, основанная на принципах архивирования по источнику происхождения и первоначального заказа, выросла из понимания того, что структура веб-сайтов соответствует организации архивных коллекций. Аризонская модель регулирует традиционные библиотечные функции, такие как идентификация и отбор, комплектование, описание, справка и доступ. На основании модели показана возможность адаптации этих функций к нуждам XXI в. при помощи перспективного архивирования.

Ключевые слова: Сетевые публикации; Архивы; Библиотеки; Делопроизводство

Elisabeth Tallaksen Rafste, Tove Pemmer Sætre and Ellen Sundt. **Norwegian Policy for Empowering School Libraries.** [Элизабет Таллаксен Рафсте, Тове Пеммер Стере и Эллен Сундт. **Политика Норвегии в области повышения роли школьных библиотек.**] Журнал ИФЛА 32 (2006) № 1, стр. 48–53

В первой части статьи дана общая картина школьных библиотек в Норвегии, приведена статистика, в общих чертах обрисованы контуры законодательства о школах и библиотеках, а также отмечены некоторые аспекты национальных учебных программ для начальных и средних школ. В статье показаны сложные и интегрированные системы, в которых должно быть найдено место для школьных библиотек, рассмотрены проблемы их успешного развития, возможности наведения мостов и меры для преодоления препятствий. Во второй части статьи рассмотрен стратегический план: «Оборудование мест для чтения; стратегия стимулирования навыков и получения радости от чтения на 2003–2007 гг.». Он иллюстрирует возможности объединения политических, образовательных и библиотечных систем в целях повышения роли школьных библиотек, стимулирования развития навыков и интереса к чтению. Проведен анализ ряда проектов и дана оценка вкладов различных сторон, описан процесс внедрения проекта и показаны предварительные результаты. В заключение авторы обращают внимание на те трудности, которые предстоит преодолеть школьным библиотекам Норвегии в будущем.

Ключевые слова: Школьные библиотеки; Норвегия

Chris Watts and Ijeoma Ibegbulam. **Access to Electronic Healthcare Information Resources in Developing Countries: experiences from the Medical Library, College of Medicine, University of Nigeria.** [Крис Уотс и Иджеом Ибегбулам. **Доступ к электронным информационным ресурсам в области здравоохранения в развивающихся странах: опыт Медицинской библиотеки Медицинского колледжа Университета Нигерии.**] Журнал ИФЛА 32 (2006) № 1, стр. 54–61

В статье представлены результаты предварительного изучения ситуации в области доступа к электронной медицинской информации в развивающихся странах. Основной акцент сделан

на положении Медицинской библиотеки медицинского колледжа Университета Нигерии. На основании обзора текущей литературы дана общая оценка широкого спектра проблем, связанных с доступом к электронной информации в развивающихся странах, а также рассмотрены специфические вопросы, касающиеся электронной информации в области

здравоохранения. Выявлены научные конкретные исследования, базирующиеся на опыте Нигерии. На основе информации, собранной в результате интервью с библиотекарями медицинской библиотеки, определен круг проблем, среди которых: неадекватная инфраструктура информационно-коммуникационной технологии (ICT), отсутствие доступа в режиме

онлайн. Показана необходимость углубления знаний и навыков в поиске информации, как для библиотечного персонала, так и для пользователей библиотек. Определены области для продолжения исследования.

Ключевые слова: Информация в области здравоохранения; Электронные информационные ресурсы; Доступ; Нигерия; Нигерийский университет

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