

Access to Information in Digital Libraries: Users and Digital Divide

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Outline

- The Context
- Digital Divide
- Role of Digital Library Researchers
- Access to Digital Information
- Human Information Behaviour
- Problems and User Comments
- Possible Solutions
- Discussions

The Context: WSIS

- World Summit of the Information Society, Geneva, 10-12 Dec. 2003:
 - Declare our common desire and commitment to build a people-centred, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge

WSIS Declaration

- 'We recognize that education, knowledge, information and communication are at the core of human progress, endeavour and well-being.'
- 'all stakeholders should work together to: improve access to information and communication infrastructure and technologies as well as to information and knowledge ...

Digital Library R&D: Goals

- To improve access to information
- To facilitate creation and distribution of information
- To help in making optimum use of information in all activities
- To help in the creation of a global information society

Questions

- But, how far have we succeeded to achieve these goals, and
- What are the major problems

Digital Divide

- The perceived disadvantages of those who are either unable, or do not choose, to use the appropriate ICT to perform their activities, decision making, learning and pleasure
- Access to digital libraries and information services is significantly influenced by digital divide
- Proper access to, and use of, digital libraries is a key to bridging digital divide

Digital libraries and information

- Digital information resources can be accessed in a no. of ways, e.g., through:
 - Institution's library webpages
 - Webpages of specific digital libraries such as NDLTLD, NCSTRL, NZDL, ACM digital library, PubMed
 - Subject Gateways, such as SOSIG, Biz/ed, OMNI
 - Search service providers such as Dialog, Ovid online, Proquest
 - Web search tools: search engines including meta search engines

Questions

- Do the users always find it easy to get access to the right information?
- How easy are today's hybrid libraries to find all the information resources required to solve a problem or accomplish a task?
- What can we learn from the recent human information behaviour research?

Human Information Behaviour

Issues	Web	Online IR	OPAC
Queries per user per session	1-2	7-16	2-5
Terms per query	2	6-9	1-2
Doc viewed/session	≤ 10	approx 10	< 50
Queries with adv. options	9%	9%	8%
Queries with Boolean operators	8%	37%	1%
Queries improperly formatted	10%	17%	7-9%

HIB: General Comments

- Users find it difficult to formulate complex queries.
- In general users spend very little time on searching a given web search tool or database.
- In most cases users formulate very short and simple queries with one or two search terms and very few search operators.
- Users spend very little time in deciding the usefulness or relevance of the retrieved items.
- Very few queries contain advanced search features.

Current Digital Libraries

- We have a variety of digital library services
- Users are most likely to use a hybrid library
- A hybrid library provides access to a variety of electronic information resources and services
- Most HLs provide separate interface for each resource type

University of Strathclyde Library



Univ. of Strathclyde Library (2)

The screenshot shows a web browser window displaying the University of Strathclyde Library Services homepage. The browser's address bar is empty, and the toolbar shows standard navigation icons. The website has a dark blue header with the library's logo on the left and navigation links in the center. A vertical sidebar on the left contains links for library access and membership. The main content area is divided into several sections: 'Electronic Library Services' with a '[nonjava version]' link, a disclaimer about access restrictions, 'Catalogues, ejournals & ebooks' with a list of links, 'Frequently used electronic services' with a 'Jump to...' dropdown, and 'Subject and Reference services' with a list of links. The footer includes a 'Contact us' button, the last modified date (February 2004), and links to the disclaimer and privacy policy.

University of Strathclyde Library Services
[Electronic Library Services](#) | [About the Library](#) | [AskUS](#)
[Catalogue](#) | [Special Collections](#) | [University](#) | [ITS](#) | [Library](#)

Electronic Library Services [\[nonjava version\]](#)

Please note: [Access restrictions](#) to individual electronic resources are determined by the service providers' [licence agreements](#) and procedures for [Ath](#)

Catalogues, ejournals & ebooks

- [Library catalogues](#)
- [Ejournals and newspapers/media](#)
- [Ebooks](#) including [netLibrary](#)

Electronic databases

- [By subject](#)
- [Alphabetical list](#)
- [Services and providers](#)
- [Database news](#)

Frequently used electronic services

Jump to...

Subject and Reference services

- [Reference Shelf](#) plus [FAQs](#) and [news](#).
- [Subject Services](#) - listed by Faculty.
- [Government Information](#) - UK, EU & world.
- [Web navigation tools](#) - search engines.
- [Exam papers](#)

Libraries at Strathclyde

[New users](#)

[Access and membership](#)

[Library site map](#)

[Search this site](#)

[Comments and Suggestions](#)

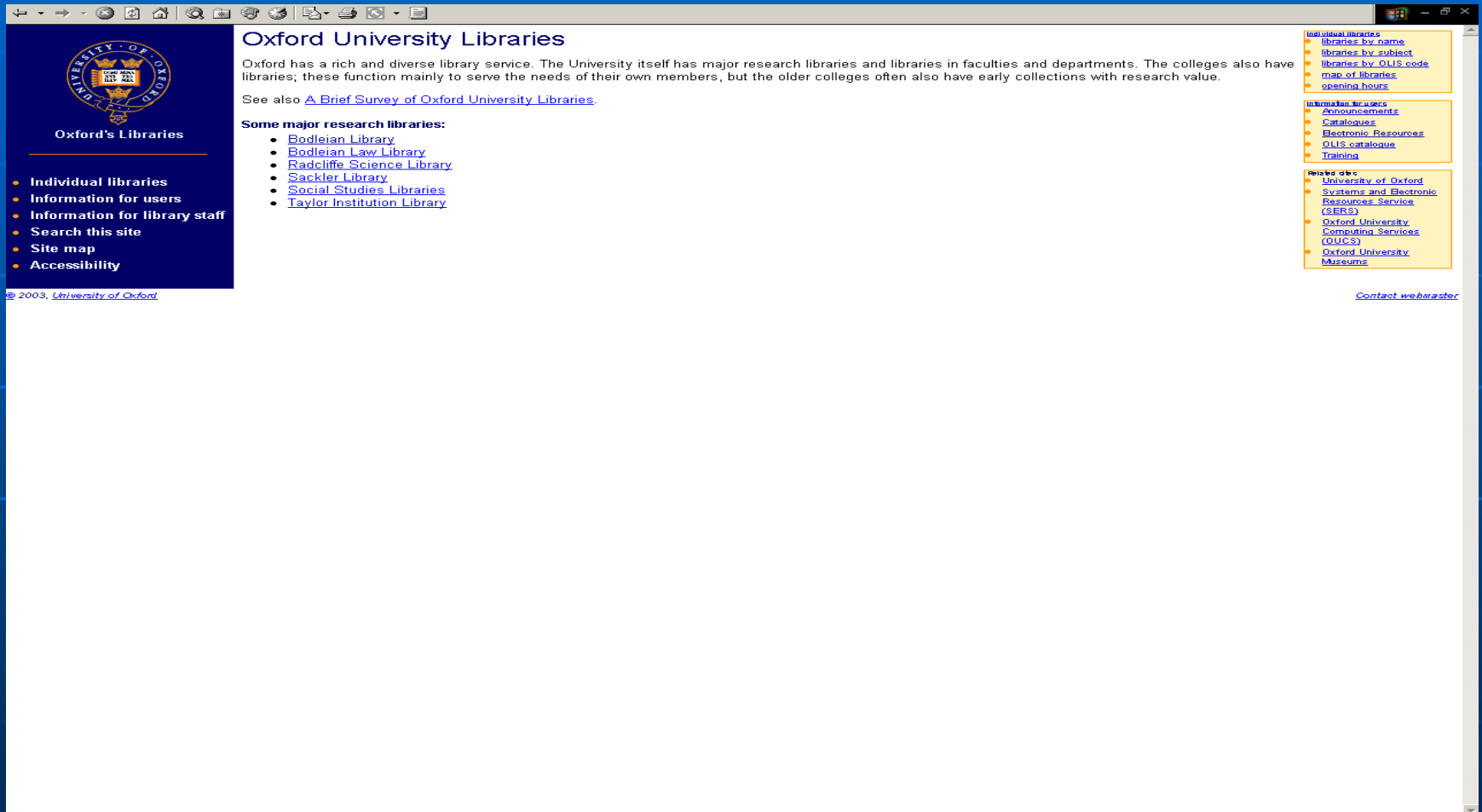
[Athens Registration](#)

[Contact us](#)

Last modified: February, 2004

[Disclaimer](#) | [Privacy](#)

Oxford University Libraries (1)



The screenshot shows a web browser window displaying the Oxford University Libraries homepage. The browser's address bar is empty, and the toolbar shows standard navigation icons. The website has a blue header with the Oxford University crest and the text "Oxford's Libraries". A left sidebar contains a list of links: "Individual libraries", "Information for users", "Information for library staff", "Search this site", "Site map", and "Accessibility". The main content area is titled "Oxford University Libraries" and contains a paragraph about the library service, a link to a "Brief Survey of Oxford University Libraries", and a list of "Some major research libraries" including Bodleian Library, Bodleian Law Library, Radcliffe Science Library, Sackler Library, Social Studies Libraries, and Taylor Institution Library. A right sidebar contains three sections: "Individual libraries" with links to "libraries by name", "libraries by subject", "libraries by OLIS code", "map of libraries", and "opening hours"; "Information resources" with links to "Announcements", "Catalogues", "Electronic Resources", "OLIS catalogue", and "Training"; and "Related sites" with links to "University of Oxford", "Systems and Electronic Resources Service (SERS)", "Oxford University Computing Services (OUCS)", and "Oxford University Museums". The footer contains the copyright notice "© 2003, University of Oxford" and a link to "Contact webmaster".

Oxford University Libraries

Oxford has a rich and diverse library service. The University itself has major research libraries and libraries in faculties and departments. The colleges also have libraries; these function mainly to serve the needs of their own members, but the older colleges often also have early collections with research value.

See also [A Brief Survey of Oxford University Libraries](#).

Some major research libraries:

- [Bodleian Library](#)
- [Bodleian Law Library](#)
- [Radcliffe Science Library](#)
- [Sackler Library](#)
- [Social Studies Libraries](#)
- [Taylor Institution Library](#)

Individual libraries

- [libraries by name](#)
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- [map of libraries](#)
- [opening hours](#)

Information resources

- [Announcements](#)
- [Catalogues](#)
- [Electronic Resources](#)
- [OLIS catalogue](#)
- [Training](#)

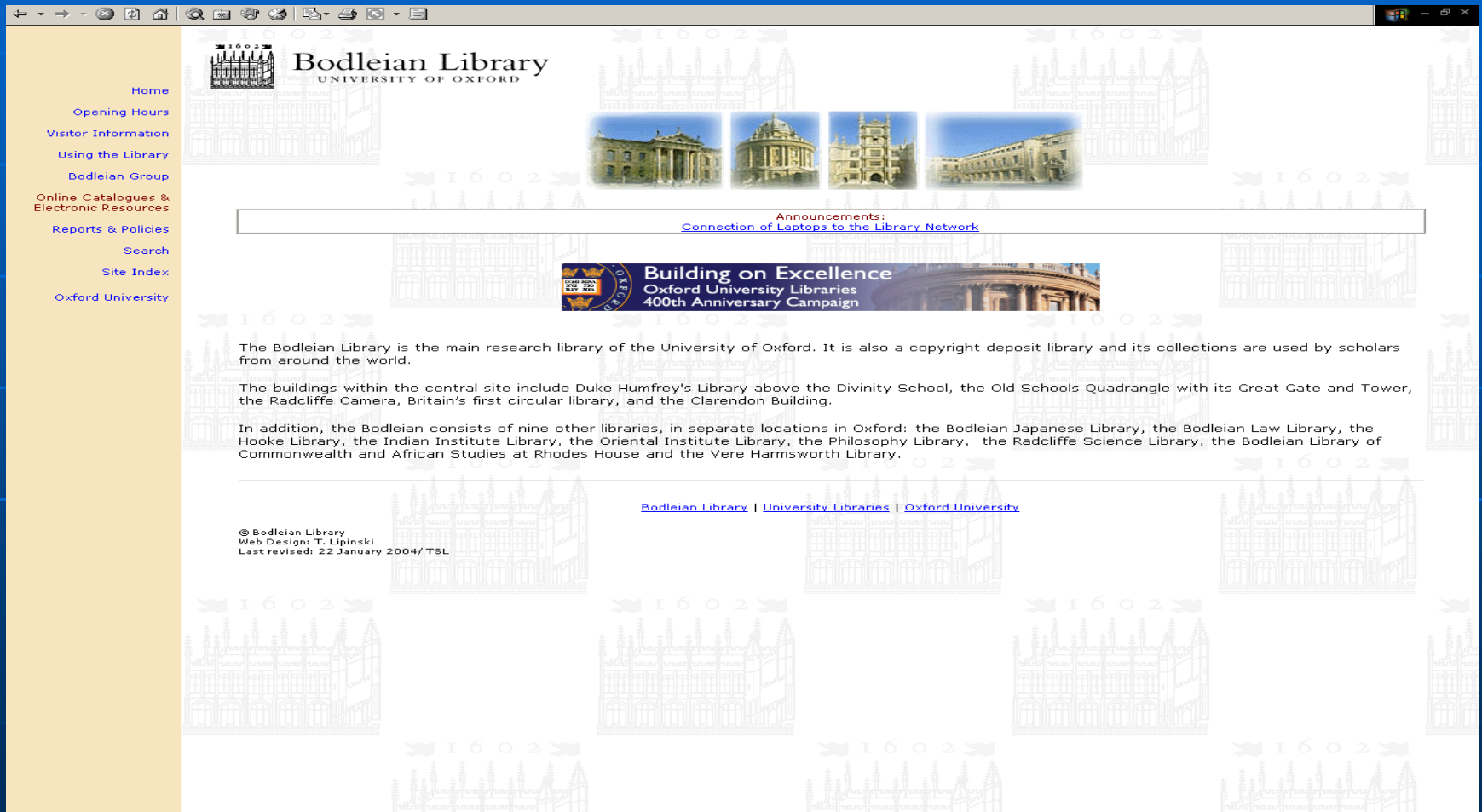
Related sites

- [University of Oxford](#)
- [Systems and Electronic Resources Service \(SERS\)](#)
- [Oxford University Computing Services \(OUCS\)](#)
- [Oxford University Museums](#)

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[Contact webmaster](#)

Oxford university Libraries (2)



The screenshot shows the Bodleian Library website with a blue header and a white background. The left sidebar contains a navigation menu with links: Home, Opening Hours, Visitor Information, Using the Library, Bodleian Group, Online Catalogues & Electronic Resources, Reports & Policies, Search, Site Index, and Oxford University. The main content area features the Bodleian Library logo and a row of four images showing different library buildings. Below this is an announcement box with the text "Announcements: Connection of Laptops to the Library Network". A banner for the "Building on Excellence" campaign is also present. The text describes the Bodleian Library as the main research library of the University of Oxford, a copyright deposit library, and lists various buildings and other libraries within the network. The footer includes copyright information and the date of the last revision.

Bodleian Library
UNIVERSITY OF OXFORD

Announcements:
[Connection of Laptops to the Library Network](#)

Building on Excellence
Oxford University Libraries
400th Anniversary Campaign

The Bodleian Library is the main research library of the University of Oxford. It is also a copyright deposit library and its collections are used by scholars from around the world.

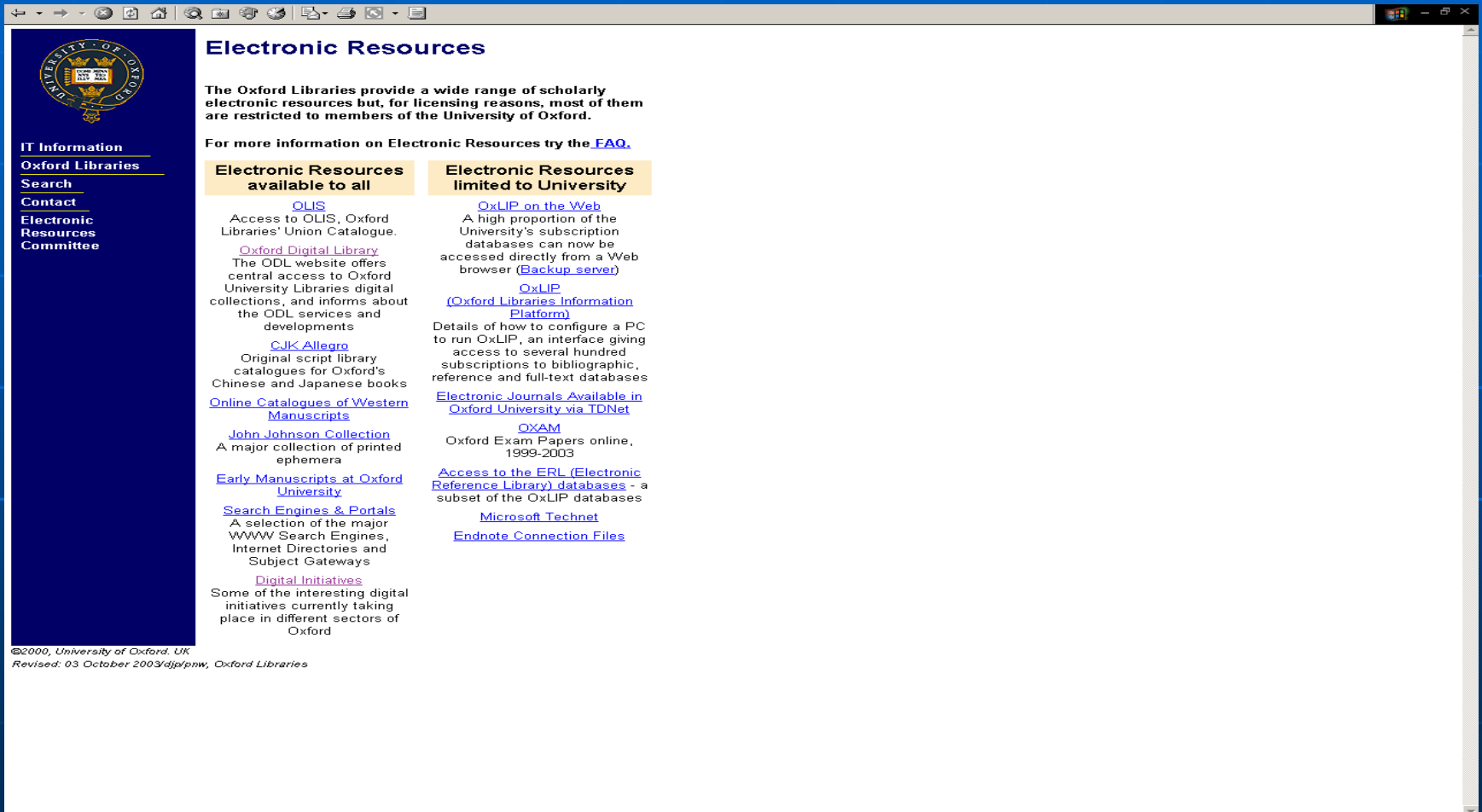
The buildings within the central site include Duke Humfrey's Library above the Divinity School, the Old Schools Quadrangle with its Great Gate and Tower, the Radcliffe Camera, Britain's first circular library, and the Clarendon Building.

In addition, the Bodleian consists of nine other libraries, in separate locations in Oxford: the Bodleian Japanese Library, the Bodleian Law Library, the Hooke Library, the Indian Institute Library, the Oriental Institute Library, the Philosophy Library, the Radcliffe Science Library, the Bodleian Library of Commonwealth and African Studies at Rhodes House and the Vere Harmsworth Library.

[Bodleian Library](#) | [University Libraries](#) | [Oxford University](#)

© Bodleian Library
Web Design: T. Lipinski
Last revised: 22 January 2004/ TSL

Oxford University Libraries (3)



The screenshot shows a web browser window displaying the 'Electronic Resources' page of the Oxford University Libraries. The browser's address bar shows the URL 'http://www.oxfordjournals.org/odl/'. The page has a blue header with the Oxford University crest and a left sidebar with navigation links. The main content area is titled 'Electronic Resources' and contains two columns of links and descriptions. The browser window includes standard navigation buttons and a taskbar at the bottom.

Electronic Resources

The Oxford Libraries provide a wide range of scholarly electronic resources but, for licensing reasons, most of them are restricted to members of the University of Oxford.

For more information on Electronic Resources try the [FAQ](#).

Electronic Resources available to all

- [OLIS](#)
Access to OLIS, Oxford Libraries' Union Catalogue.
- [Oxford Digital Library](#)
The ODL website offers central access to Oxford University Libraries digital collections, and informs about the ODL services and developments
- [CJK Allegro](#)
Original script library catalogues for Oxford's Chinese and Japanese books
- [Online Catalogues of Western Manuscripts](#)
- [John Johnson Collection](#)
A major collection of printed ephemera
- [Early Manuscripts at Oxford University](#)
- [Search Engines & Portals](#)
A selection of the major WWW Search Engines, Internet Directories and Subject Gateways
- [Digital Initiatives](#)
Some of the interesting digital initiatives currently taking place in different sectors of Oxford

Electronic Resources limited to University

- [OxLIP on the Web](#)
A high proportion of the University's subscription databases can now be accessed directly from a Web browser ([Backup server](#))
- [OxLIP \(Oxford Libraries Information Platform\)](#)
Details of how to configure a PC to run OxLIP, an interface giving access to several hundred subscriptions to bibliographic, reference and full-text databases
- [Electronic Journals Available in Oxford University via TDNet](#)
- [OXAM](#)
Oxford Exam Papers online, 1999-2003
- [Access to the ERL \(Electronic Reference Library\) databases](#) - a subset of the OxLIP databases
- [Microsoft Technet](#)
- [Endnote Connection Files](#)

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Revised: 03 October 2003/djp/pnw, Oxford Libraries

User Reactions to a Search

- In a study, 55 PG students were asked to choose a research topic and conduct a literature search using a hybrid library
- They were not given any sp. Time limit, but were advised to stop when they found that the retrieved information was adequate, or nothing was found after spending quite a bit of time on any sp.
Resource type
- They were asked to note down the search process, and the difficulties encountered

Some user comments

- For a successful search users need some basic ICT and information literacy skills
- Different systems – online search services, e-journals, etc. have different search interfaces
- Familiarity with the search topic, structure of the digital library and the organisation and content of the various systems helps
- Some search options, e.g., 'keyword', 'subject', 'title keyword', and 'subject keyword', are often confusing

User Comments (2)

- Off-campus searching is often very time consuming and frustrating
- Sometimes a search produces too many hits and needs a lot of time to decide the relevance
- A lot of useful information is available on the department and faculty intranet sites which are not accessible through the library web pages
- Library webpage does not link to subject gateways
- Organization of information on the main library page has an impact on the user's selection of a specific digital library service; sometimes the specific services are hidden under several layers

User Comments (3)

- Given the multiple variety of information resources, it is often difficult to decide which one to use; to decide the most relevant items is even more difficult
- While searching for information across a range of systems, the results from one particular search are to be saved first, then the user has to come back to the library webpage, and choose another system to search; often the user has to go through the whole process again
- Selection of appropriate search terms is a big challenge, especially for a complex or an unknown topic, and yet this is the first step in any search

Possible Solutions

- Provision for more digital literacy training
- A one-stop window for searching all varieties of digital information
- Cross-database search facilities through one interface
- Provision for user-driven information access systems
- A task-based information access system for providing access to library, internet and intranet resources

Discussions

- Any Questions:
- Thank You!