



Too difficult?

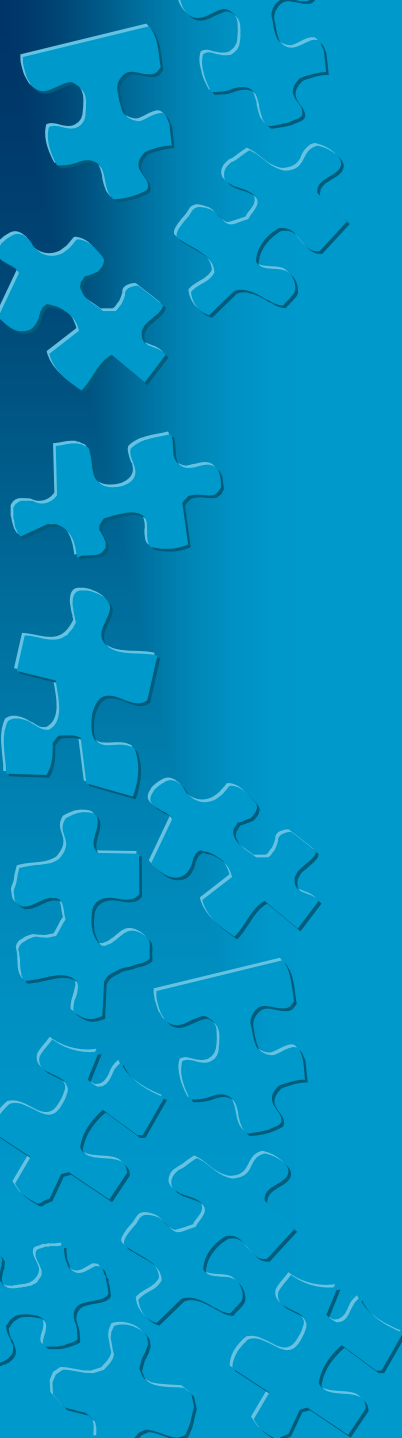
Content Management Perspective

Richard Nurse

The Open University Library

Gaining Business Intelligence from User Activity Data

London 14 July 2010



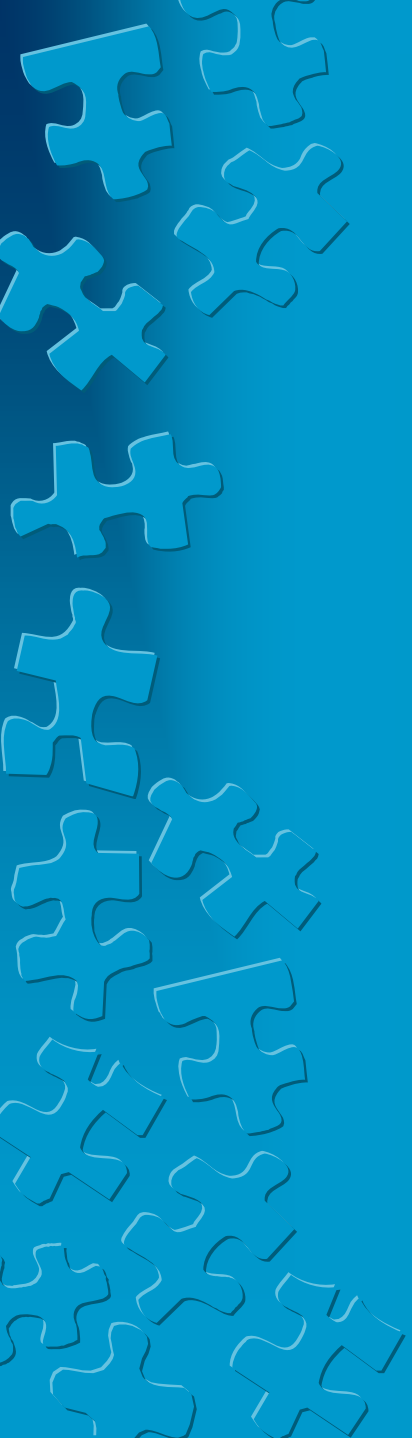
"Every day I wake up and ask, 'how can I flow data better, manage data better, analyse data better?'"

Rollin Ford, the CIO of Wal-Mart

[A special report on managing information: Data, data everywhere](#)

Economist, The (London, England) - February 27, 2010

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“Look, if you really want to transform health care, you basically build a sort of health-care economy around the data that relate to people”

Eric Schmidt, Google

"You would not just think of data as the 'exhaust' of providing health services, but rather they become a central asset in trying to figure out how you would improve every aspect of health care. It's a bit of an inversion."

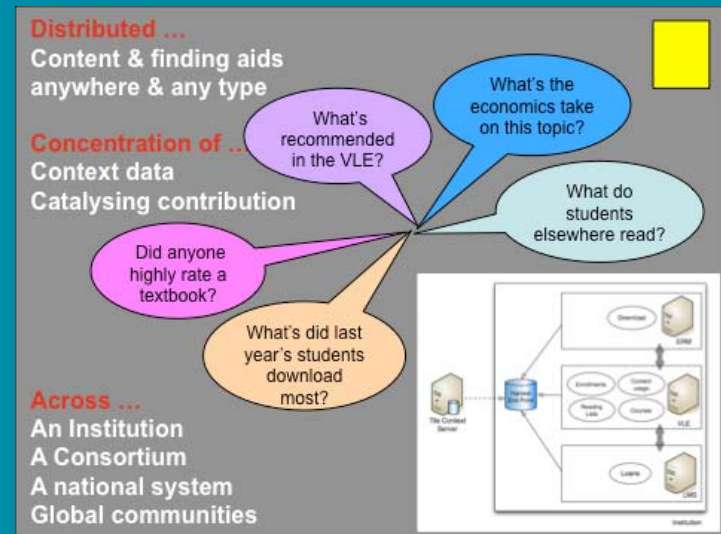
Craig Mundie, Microsoft

[A special report on managing information: Data, data everywhere](#)

Economist, The (London, England) - February 27, 2010

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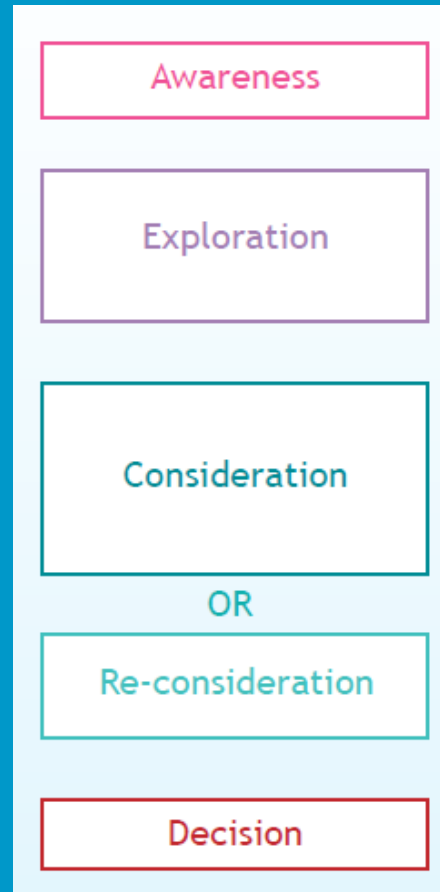
- What does success look like?
- A comprehensive solution?
- Barriers
- An Open University perspective



- **What does success look like?**
 - **for students?**
 - **for researchers?**
 - **for institutions?**



How can User Activity Data help students?



Recruitment

- What is the right course for me?
- 'Read to Learn'
- 'Course Compatibility indicator'
- Find a course based on your interests
- Loans data, search data, student profile data, open data

How can User Activity Data help students?

Orientation (new)

OR

Transition
(progressing)

Preparation

Study

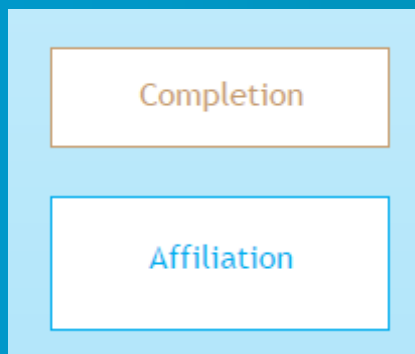
Consolidation

Reflection

Progression

- What else are students on my course reading?
- What are students on my course searching for?
- What are students citing?
- What did students who got high grades on my course read last year?
- What is on course reading lists in my subject at other institutions?
- Loans data, search data, reading lists, reference management

How can User Activity Data help students?



Post-course

- What courses have people who have done my course done next?
- What courses might I be interested in hearing about?
- What new publications, journal articles have been published in my area of interest?
- Course data, student profiles, E-resources data, Institutional repository

How can User Activity Data help researchers?



- What have other researchers in my field written?
- What resources are being cited in a particular field?
- E-resources data, search data, Institutional repository, citation data

How can User Activity Data help institutions?



- Stock management, e-resource decision making
- Who is using (and not using) resources?
- Marketing
- Academics, managers and librarians
- ‘Collection Development Dashboard’
- Achievement and retention
- Service design
- Loans data, search data, ERM data, E-resources data, search data, Institutional repository, student data

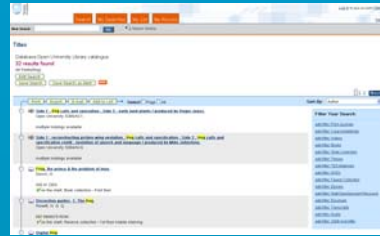
What sort of solution do we want?

- local, national?
- a platform we can submit data to?
- a set of standards, case studies and guidelines?
- some tools, APIs and applications?
- some of these?, all of these?
- open source, commercial?
- EBSM?

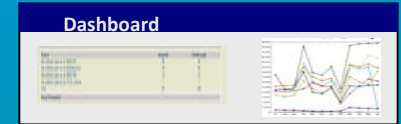


What sort of solution?

Recommendations



Visualizations



APIs
Web Services

User activity data portal

Data standards

Processes

VLE

LMS

Student
registry

websites

Finance

Link
resolver

ERM

Search
systems

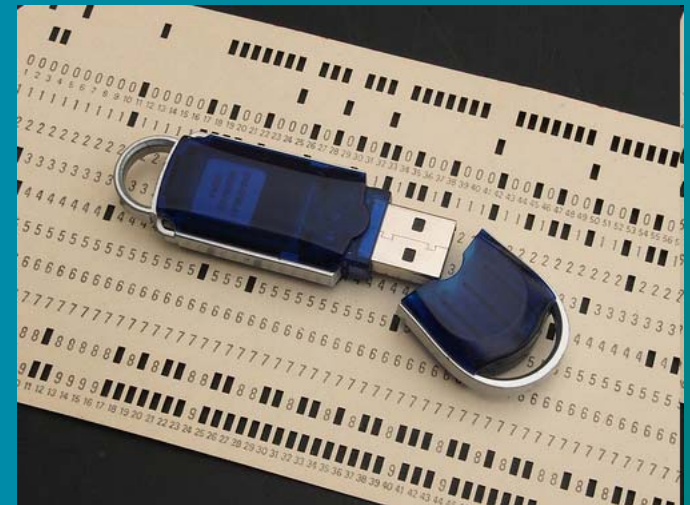
E-
resources

E-
portfolio

IR

Anything less than a comprehensive view of the world is inadequate

- No one system has sufficient data in it to uncover new insights
- an accurate picture?
- User preferences
- Customer Relationship Management





Is anything less than a comprehensive
view of the world inadequate?

“A single version of the truth”

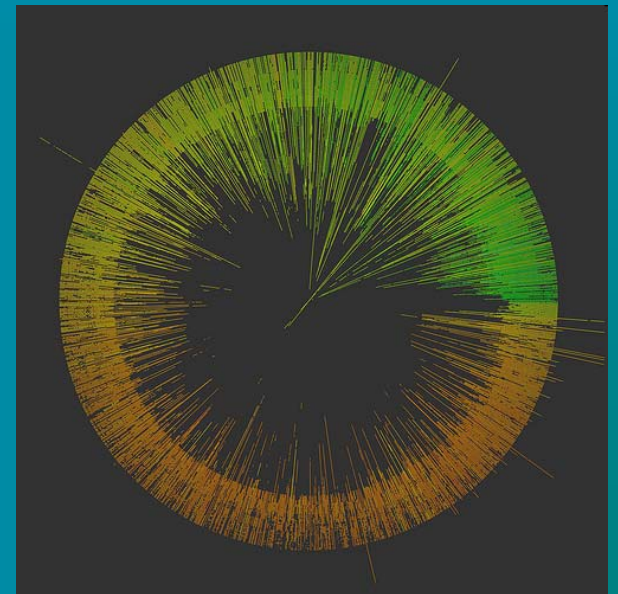
One representation - reliable - authoritative

Customers	Unique
Products	Complete
Assets	Consistent

Barriers and challenges

– Cultural and Institutional

- Making the case
- Data
- Competition
- Cost



Barriers and Challenges

– Technical

- Can you extract the data?
- Do you have the skills and access?
- Historical data
- Publishing recommendations
- Wide range of different systems



Barriers and Challenges

– Data processing

- What steps do you need to take with the data once you have it?
 - Anonymisation
 - De-duplication
 - Removing records that might identify an individual
 - Do you need to change your practices about what data you store in your systems?
 - How do you cope with the large volume of data?





Barriers and Challenges

– Standards

- Are there suitable standards to help with extracting and processing data from a range of different systems?
 - IMS?
 - MOSAIC data spec and case studies

Barriers and Challenges

– Rights

- Data protection
- Data ownership
- Permission from owners/users

An Open University perspective



An Open University perspective

- Most Open University students never visit the Open University library
- Most OU students never borrow a book from the OU library
- Most OU students aren't on the OU Library Management System
- So the LMS isn't very useful for user activity data



An Open University perspective

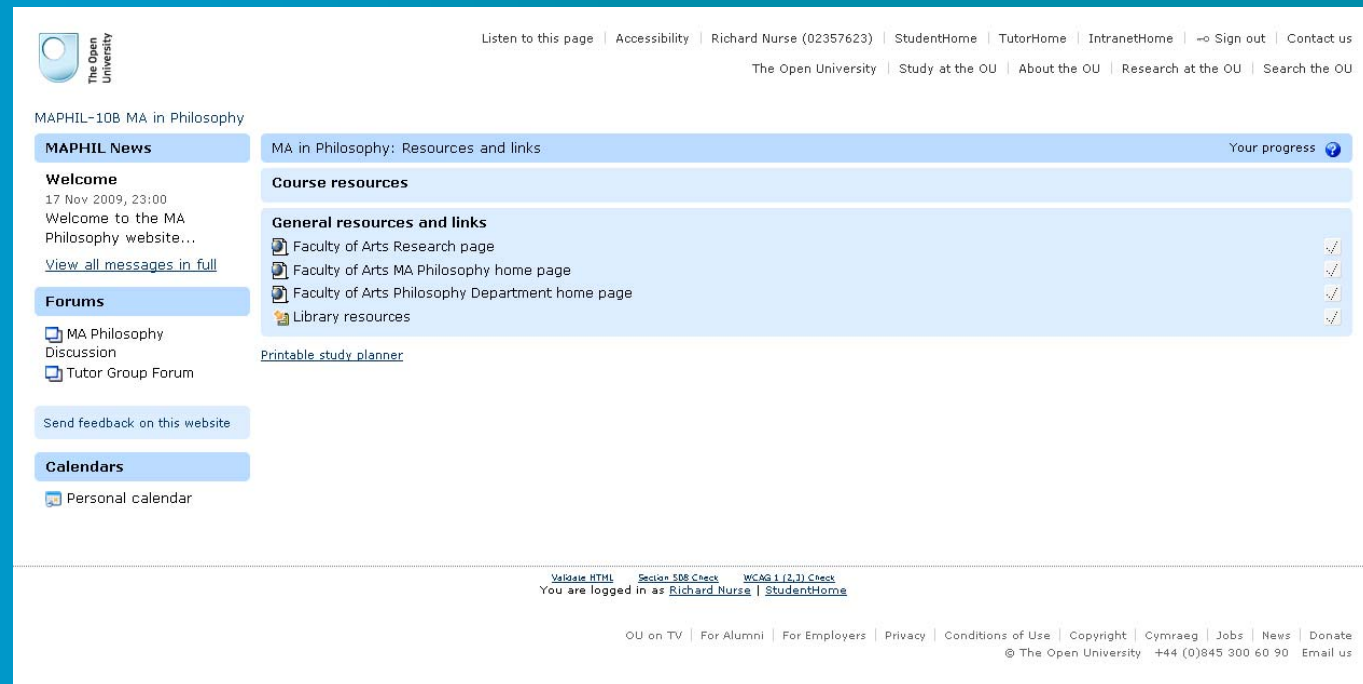
- Our print collection is being reduced in size
- OU students sign-up to a module rather than a full-degree course



An Open University perspective

However

- The OU has over 120,000 visits a month to the Moodle VLE
- 100,000+ visits to the library website a month
- 170,000 visitors to Student Home each month
- And a single sign-on solution



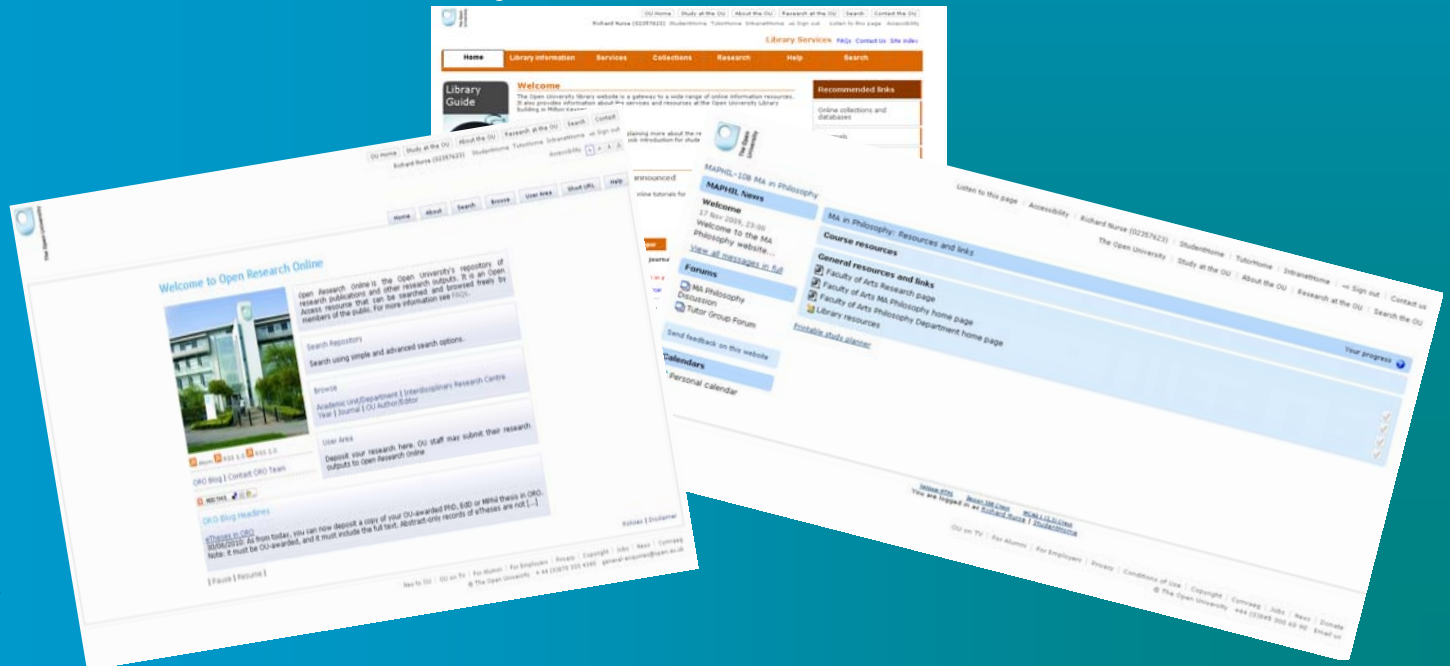
The screenshot displays the Moodle VLE interface for the course 'MAPHIL-10B MA in Philosophy'. The page is organized into several sections:

- Header:** Includes the Open University logo, navigation links (Listen to this page, Accessibility, Richard Nurse (02357623), StudentHome, TutorHome, IntranetHome, Sign out, Contact us), and search options (The Open University, Study at the OU, About the OU, Research at the OU, Search the OU).
- Course Title:** 'MAPHIL-10B MA in Philosophy'.
- MAPHIL News:** A 'Welcome' message dated 17 Nov 2009, 23:00, with a link to 'View all messages in full'.
- Forums:** Lists 'MA Philosophy Discussion' and 'Tutor Group Forum'.
- Calendars:** Includes a 'Personal calendar' link.
- Course Resources:** A section titled 'MA in Philosophy: Resources and links' with a 'Your progress' indicator. It contains a 'General resources and links' list with four items: 'Faculty of Arts Research page', 'Faculty of Arts MA Philosophy home page', 'Faculty of Arts Philosophy Department home page', and 'Library resources', each with a checkmark icon.
- Footer:** Contains accessibility links (Validate HTML, Section 508 Check, WCAG 1.2.1 Check), user information (You are logged in as Richard Nurse | StudentHome), and site information (OU on TV, For Alumni, For Employers, Privacy, Conditions of Use, Copyright, Cymraeg, Jobs, News, Donate, © The Open University +44 (0)845 300 60 90 Email us).

An Open University perspective

But - learning systems are run by different departments

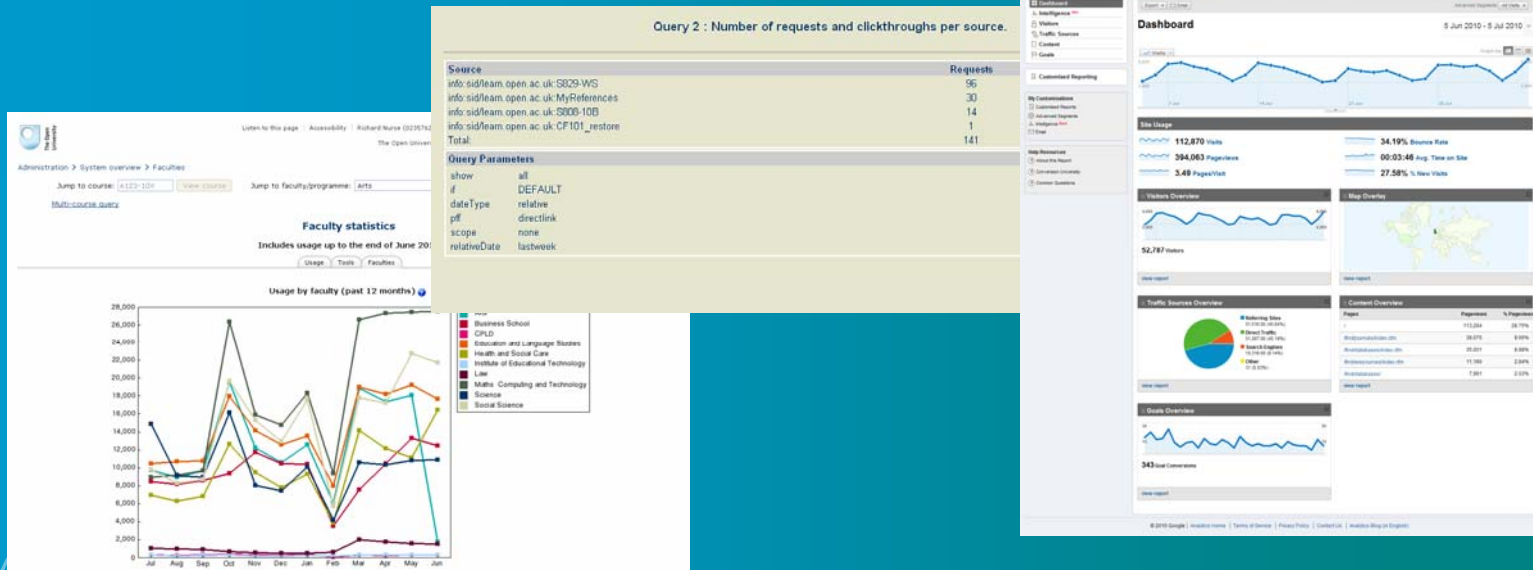
- VLE – Learning and Teaching Solutions
- Student registry – Student Services
- Library – SFX and search systems
- Public and student search – Online Services and Academic and Administrative Computer Services



An Open University perspective

And – different systems have their own reporting tools

- VLE bespoke reporting tool
- Site Intelligence
- Google Analytics
- SFX, Crystal reports



Some early steps

- bX from ExLibris

Users interested in this article also expressed an interest in the following:

- 1. Beatty, E. "[Why customers stay: Measuring the underlying dimensions of services switching costs and managing their differential strategic outcomes.](#)" Journal of business research 55.6 (2002): 441-450. 
- 2. Patterson, G. "[A cross-cultural study of switching barriers and propensity to stay with service providers.](#)" Journal of retailing 79.2 (2003): 107-120. 
- 3. Sharma, N. "[Switching costs, alternative attractiveness and experience as moderators of relationship commitment in professional, consumer services.](#)" International journal of service industry management 11.5 (2000): 470-490. 

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[Select All](#) [Clear All](#) [Save Citations](#) Select Format 

[More Options](#)

Some early steps

- TELSTAR JISC project
- Integrating reference management into the VLE
- Using SFX to link to resources
- Usage data collected by SFX that can identify which resources are being used in which courses
- www.open.ac.uk/telstar

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MyReferences

References

- View all references
- Create reference
- Import references
- Export references
- Create bibliography
- Reference reports

Folders

- test
- Create folder
- Manage folders

Shared accounts

- Create shared account
- Manage shared accounts

RefWorks

- Access your account

Support

- Further information and guidance

MyReferences

MyReferences allows you to build a personal library of references. A reference is a detailed description of a source used in your study or research and could include books, journals websites and many other types of material.

MyReferences helps you to create correctly formatted bibliographies (lists of all the materials that you have referred to in your work or have used as general reading to provide background reading for your study or research) and citations (an 'indicator' you put in the text to alert the reader to the fact you are talking about somebody else's work or using somebody else's words) using the references you have saved.

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Powered by
RefWorks

Developments

- LUCERO
- JISC-funded project
- Linking University Content for Education and Research Online
- Expose Open University content as linked data
- Will include recommender features
- <http://lucero-project.info/lb/>



Finally

- We want a comprehensive view of the world ... if we can get it
- The main challenges to be overcome are:
 - A comprehensive set of tools, standards and case studies
 - Acquiring the necessary skills
 - A commitment that this is the way forward
 - A change in culture towards 'open' data

<http://www.slideshare.net/RichardNurse>

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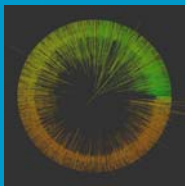
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MOSAIC final report

<http://www.sero.co.uk/jisc-mosaic-documents.html>



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