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# Some drivers for elearning National Science DicitaL LIBRARY

- Learner learns at own pace and time;
- New ways of widening participation?
- Supports life long learning

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- New modes of course structure and delivery;
- Quick development of new courses
- No geographic boundaries;
  - Supports distance learning;
- Learning centred on the Learner;
- Meet student expectations for IT;
- Technical Innovation;
- More economy in delivery;

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#### **UK** Context



- Vast majority now using elearning in one way or another
- Key developments are Blearning/Dlearning/Mlearning
- But perceived disadvantages:
   Cost and time involved up fr
  - Cost and time involved up front costs Staff Resistance to culture change Need for large scale staff development Pedagogy unproven Assumes IT know how Needs greater support 24/7 Doesn't suit all students

#### ELOS Virtual Learning Environments **EXCELLENCE ON** LIBRARIES LMS

- Manage and Deliver content (increasingly separate)
- Authoring Environment
- Support communications
  - Synchronous and asynchronous
- Manage courses

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- Manage students
- Manage assignments
- Manage tests







- Open source packages (e.g. Moodle, Sakai, Boddington)
- Bespoke packages
- Hand-crafted course/web-sites



• Teaching Staff want to:

Locate and deliver resources for learners Build citations and/or externally held resources into course content At "reading list" and "activity" level

Retain their intellectual property





• Learners want to:

Easily locate resources and click through to full text/image;

Access references and/or externally held within resources in course content

Build their own resource collections

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Hence





- Which can deliver a variety of resources to the student desk top whereever, whenever ie global authentication;
- Can manage that process on behalf of faculty and students.



### **Content for Elearning**



- Academic content e.g. notes
- . Web sites
  - Images
  - Audio
- Licensed content
  - E books
  - E journals
  - . E reserves/short loan/textbooks
- Packaged courses



• Authored by teacher

Complexity

- Copied into VLE from digital repositories
- Bought as complete packages
- Links to open web resources
- Link to internal/on site digital repositories
- Link to external repositories
- Link to external licensed repositories



Figure 3. Cosmic View of Repositories (McLean, 2004)



### Reusable content



- Idea of content disaggregation
- Re rebuild and re-purpose content to create new/different learning outcomes
- . Content derived from repositories
  - . Merlot
  - . Jorum
- But no great evidence of need (see Friesen)

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### Rationale for digital library/VLE integration



- Digital library can be managed (as a shared resource) whilst VLE resources are localised;
- Students preference to stay inside domain (VLE); students 'live' in VLE; learning is contextual
- Linking is simple via URL etc



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#### **Citation List Tool**



Logout

Sakai

Home	💈 Resources	
Users	Add Citations	
<u>Aliases</u> <u>Sites</u>	Citation List: New Citation List Citation Count: 0	
<u>Realms</u> Worksite Setup	Add citations to the list using one or more of the methods below. Review the list to edit citations, title the list, and add it to your resources.	
MOTD Resources	Search Library Resources Search library catalog, article databases, and other resources.	
On-Line Memory	Search Google Scholar Search world-wide database of scholarly resources. Click on the "Add to CTools" link in the Google Scholar search results to add selected citations this citation list.	0
Site Archive Help	Create New Citation Add a citation by typing in data.	
Sakai Administrator		

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Management Consultancy Home  Course Material  Table of Contents  Additional Reading ACTION MENU: Previous Next Contents Retrace Refresh Bookmarks					
Additional Reading					
Because a lot of the material we use is contemporary publications, some materials will be distributed prior to and during the course, in a course pack					
The following will also be helpful reading.					
Schuyt, Theo NM and Schuijt, John JM: "Rituals and Rules: About Magic in Consultancy" (available via course materials )					
Block, Peter, <i>Flawless Consulting</i> (Jossey-Bass Pfeiffer, 2000) (available via Amazon)					
Pinault, Lewis, <i>Consulting Demons</i> .(Wiley, 2000) (available via Amazon)					
Mats Alvesson "Knowledge Work and Organisational Forms" Journal of Management Studies,	1993.				
E Table of Contents: Mage 10/14					







- Links to other management systems such as student records;
- Links to portfolios/assessment records
- Links to timetabling
- Links to libraries
- Provides for student perspective eg student portal



#### DELOS Network of Excellence on Digital Libraries



- Less risk attached for any single University More sharing of expertise
- Can be strictly evaluated But
- Need to embed in structure once complete
- Funding through:
  - CEC/UK (JISC)/Governments





### Some projects



- Angel
- Colis (Australia)
- Devil
- DiVLE
- Easel (europe)
- Econtent and Econtent plus (Europe)
- Linker
- Olive
- etc









- Authenticated Networked Guided Environment for Learning
- Funded by JISC under Programme 05/99, 'Developing the Distributed National Electronic Resource for Learning and Teaching'





...users get a <u>choice</u> of purpose-specific interfaces, but <u>also</u> access to (some) content from other purpose-specific systems

Paschoud,



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ecision	eContentplus programme	European		
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ork Programme Is	On 9 March 2005 the European Parliament and the Council approved the eContentplus Programme, a multiannual Community programme to make digital content in Europe more accessible, usable and exploitable.	<ul> <li>The ICT Policy Support Programme recruits independent</li> </ul>		
roposals «perts 4Q osed calls	The 4-year programme (2005-08), proposed by the European The eContentplus Commission, will have a budget of € 149 million to tackle programme will organisational barriers and promote take up of leading-edge technical make digital solutions to improve accessibility and usability of digital material in a multilingual environment. more accessible.	experts (10/05/07) <ul> <li>New website of the</li> <li>ICT Policy Support</li> <li>Programme launched</li> <li>(20/03/07)</li> <li>More news</li> </ul>		
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- eLearning: IMS, IEEE LOM, SCORM...
- Libraries: DC, z39.50,
- Plus internet.....
- And stuff in the middle: XML, JSR
- IMS now "overlaps" with Reading List, Digital Repositories

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### About IMS

- Non-profit worldwide consortium
  - Sectors represented: Standards bodies, Domain consortia, Learning providers, Government agencies, Content providers, Technology vendors, Researchers, Labs & Test beds
- Creates e-learning specifications
- Adoption and best practice
- Collaboration between e-learning constituencies focused on specific segments of the market;



### **IMS Specifications**



Content Packaging Metadata Enterprise Learner Information Question and Test Simple Sequencing Digital Repositories Learning Design Accessibility



- Provides a way to package learning information and metadata:
  - Packaged Learning Objects
  - Bundled Question and Test Objects
  - Learning Information Packages
  - Sequencing Information
  - Learning Design Support
  - Adopted by US DOD for SCORM

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IMS Digital Repositories Interoperability Specification



- Federated data-base architecture
- Search / Retrieve / Update
- Based on XQuery and Z39.50
- Final specification due by end of 2002

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- Need for metadata which puts content into context (pedagogic metadata)
- Need for descriptive metadata
- Standards
  - . IEE LOM
  - . IMS learning Resource metadata standard



- Cannot be isolated from institutional goals and objectives
- Will need to focus more explicitly on the needs of users in the light of increased competition
- Universities need to reflect the changing agenda of a distributed user community;
- Information needs will be diverse in format and scope but will be focussed on specific outcomes
- Will need to work in partnership with others to provide holistic support to students;

# Implications for libraries



- Increasing responsibilities for digital assets
- Exposing services in novel ways

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- Marketing and exploitation plans
- Be responsive to needs "outwards facing"
- New roles e.g. electronic copyright clearance
- Issue of "content plagiarism"
- Converge towards sector standards in handling meta-data
- WWW vs national vs regional vs local resources
- Need to provide information literacy and IT skills





## Librarians' involvement....

- Traditional role not course-specific
- Librarians as a whole haven't made their case

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### Formal v informal education



- Education System
  - Sectors
  - Institutions
  - Courses
  - Curricula
  - Modules
  - Cohorts
  - Certification
  - Massive regulation
- Technologies and services to support this

- Informal Learning
  - Community/work based
  - Need/interest driven
  - Informal groups
  - No certification
  - No pre-requisites
  - Unregulated
- Increasingly on the web





- Formal versus informal learning
- VLEs as a straitjacket links to institutional goals
- Therefore
  - Personal learning environments (PLEs)
  - User creates own study space and links to relevant tools



System

Anyone!







- Personal System, Environmental System
  - A VLE gives access to tools
  - A PLE gives access to services but gives control of instrumentation to the user







- Institutional Issues
  - change in role from provision to support
  - institutions stop owning students (see themselves as part of LLL or learning journey)
  - focus on design of learning rather than delivery of learning



PLEs



- Pedagogical Issues
  - Single learning space across subjects
    - encourages student to see learning as inter-related
  - Support development of skills in managing learning, recognising goals and progress, communication and teamwork skills
  - Single learning space across formal and informal learning lifelong & lifewide



#### PLEs can



- Give learner control over the tools they use
- Exploit emerging services (web 2.0)
- Support the integration of learning episodes
- Integrate formal and informal learning
- Requires changes in institutional technologies



#### Personal Learning Landscape



image developed by the Elgg development team - cor

Personal Learning Environment



ARY

Jeremy Hiebert 2006