

Re-purposing Content: From e-publications to Learning Objects

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The theme of the seminar was " Re-purposing Content: From e-publications to Learning Objects". E-Books have been viewed cautiously by many libraries. Access and licensing problems have made them seem inflexible and costly. Users have been slow to take them on board because of their perceived limitations. The e-learning community appears to have largely ignored e-books as learning materials, focusing instead on 'learning objects'. Could e-books become learning objects, perhaps by breaking down content into chunks suitable for use in e-learning packages? Or are the two things wholly different? This meeting brought together four speakers who gave interesting accounts on where we are now and where the future lies.

Julie Carpenter, Education for Change

Julie's paper was called "A Strategy and Vision for e-textbooks in Further and Higher Education. Julie was able to give us an overview on the situation within the academic sector and the challenges we face. In 2003 the JISC E-Books Working Group commissioned Education for Change Ltd and the University of Stirling to undertake a study to define the business and market context for electronic textbooks for UK further and higher education, to shape the work and role of the Working Group and to provide a vision for the future (up to 10 years ahead) of electronic textbooks. Julie spoke about the findings of the report. She opened with the e-book situation as it is now. What is an e- textbook? The market is dominated by US and international publishers. Online aggregators such as Netlibrary are emerging as important players. Julie spoke about existing problems/issues which included: E-Books formats use the metaphor of the printed book; technology of reading online remains a constraint and digital rights management not sufficiently developed for commercial use.

She then looked at common trends in the education market: growth in student numbers, pressure to widen participation, changing learning and teaching practices and the impact of ICT. Within the HE market, there are three levels of textbook use: course adoptions, essential reading and recommended supplementary reading. E textbooks are mostly versions of essential and recommended readings. Publishers are adapting a very cautious approach: student textbooks provide a turnover of 150 million a year. FE markets bring it own restraints: use of textbooks as course books is widespread and funding and resource levels are limited. E content development is more dependent on external sources.

Julie summarised the future as seen from the report: in the medium term (5-7 years) new players will emerge including HE/FE consortia, publisher and VLE partnerships will increase and licensing and tracking usage will be developed. In the long term (10-15 years) integrated online packages for students, learning objects and new partnerships and customisation will emerge.

The report conclusions were that the current business models were too limited, (aimed at research but will not transfer to teaching and learning), link with print must be broken, (licences for use not licences for access as with ejnls) role of the library needs assessing, new business models needed and the "one size for all " does not fit market diversity.

Julie finished her presentation by summarising what has changed and what has not changed since the report was published. Changes have been seen in attitudes and approach within the HE/FE sector, e-learning technology developments, the volume of

e learning content from diverse sources eg JORUM and the skills and access to e learning at institutional levels.

However what not changed: link with print among academic publishers; cautious approach to business models and two streams of development (driven by e learning and teaching and driven by commercial publishing). The full JISC report can be found at

http://www.jisc.ac.uk/uploaded_documents/Annex_E_E_Textbooks_Strategy_final_report.pdf

Prof. Steve Molyneux, Director, Learning Lab / ADL Partnership Lab (UK)

Steve's paper was called "CORDRA: ADL's Federated Content Repository Model" The Learning Lab provides a centre of excellence to support all those involved in the design, development and use of learning technologies. Steve talked about the Lab's collaboration with the US Advanced Distributed Learning Initiative and the role of what he calls 'shareable content objects' in the future of e-learning. Steve opened his presentation by giving a definition of ADL: "ADL is an evolution of distributed learning that emphasises collaboration on standards-based versions of reusable objects, networks, and learning management systems yet may include some legacy methods and media". **Anywhere, anytime availability is the key.**

He then gave a definition of SCORM (Shareable Content Object Reference Model) SCORM is a series of standards designed to facilitate portability, interoperability, and usability across platforms without regard to proprietary issues. Steve finally then gave a definition of SCO (Shareable Content Object), which are the building objects, which allow developers to share products from others when creating a learning experience. They are described, stored and retrieved through the use of metadata tags. However the big problem is finding content. SCORM specifies how to develop and deploy content objects that can be shared but does not help with the finding and re-using of the content. This is where CORDRA comes in.

CORDRA stands for Content Object Repository Discovery and Registration/Resolution Architecture. Its goal is to develop a model for how to do this, using existing technology from the worlds of learning content management and delivery, content repositories, and digital libraries. CORDRA aims to identify and specify (not develop) appropriate technologies and existing interoperability standards that can be combined into a reference model that will enable learning content to be found, retrieved and re-used. Steve listed the main requirements for learning content repositories and these include: developers of learning content want their content to be found; searchers of content often want only exactly what they need. This is where metadata is so important. Most users and developers are not skilled at either tagging content or expressing detailed queries. Therefore an essential requirement was that guidance and very simple effective search and interfaces for tagging content are needed. Other requirements include flexibility and must support local policies. Steve finished the session by summarising CORDRA:

- A reference model
- Collection of existing standards
- An "identifier" system
- An overall "architecture"
- Operational community implementations
- Independent existing repositories
- Community CORDRA instance

- Instance- and repository-specific operational rules and policies

Full details of CORDRA can be found at <http://cordra.lsal.cmu.edu/>

Charles Duncan, CEO, Intrallect Ltd and Jackie Carter, JORUM Project Manager

Jackie opened the session by explaining what JORUM is. JORUM is “a free online repository service for UK H/FE, offering access to learning and teaching materials and helping to build a community of sharing”

The research project started October 2002 and is part of JISC’s Exchange for Learning (X4L) Programme. The partners are EDINA and MIMAS and the advisors are the Centre for Educational Technology Interoperability Standards (CETIS) (<http://www.cetis.ac.uk>). After a requirements exercise in 2003 and a full report in January 2004, a complete procurement exercise under European Union rules was carried out in July 2004. IntraLibrary from Intrallect Ltd (<http://www.intrallect.com>) was selected

Jackie then answered the question: Why a JISC Repository?

“It provides long-term retention for publicly funded project outputs and will take learning/educational/training materials. It supports staff involved in learning and teaching in their work and it promotes the sharing, re-use and re-purposing of content. Finally it stands as a national statement of the importance of creating interoperable, sustainable materials.”

JORUM will be a service-in-development, similar to other data centre services. It will use Athens authentication and offer user support, training, helpdesks etc. Institutions will nominate one site representative and one technical support representative. There will be two licences: one for Contributors and one for Users. Full details of the licences (licensee is HEFC) can be found on the JORUM web site at <http://www.jorum.ac.uk>

Jackie stressed the importance of the quality assurance of metadata. Contributors need only create the following metadata: mandatory fields (system will automatically populate most of them); details of third party IP owners and one high-level subject classification. Objects are published to the system immediately. Cataloguers pick them up via workflow to add additional metadata and reviewers check 25% of cataloguers’ records. Jackie finished by explaining an Enhancement Committee/User Group is to be established, which will meet twice yearly. The X4L phase 2 projects will also suggest improvements

Charles then gave a demonstration of IntraLibrary, which is a solution for building a **Learning Object Repository**.

He showed us two views: one from the user (what can I use in teaching?) and also how it is used as a repository. There are various ways to browse including Dewey and UK educational levels. An academic can upload a file, a package or a web resource. The resource is then available for access immediately but needs cataloguing. Charles also stressed the importance of the metadata. The quality of the metadata is consistent but flexible. Each page is a separate resource. The main features of IntraLibrary include: storage and retrieval of learning objects, searching and structured browsing of the repository, online tools for cataloguing learning objects and personal collections of learning objects (MyLibrary). It supports any digital format.

Steve Walmsley, Kainao Ltd

Sentient Learning are marketing the Learning Object Repository developed at Huddersfield University as part of the HLSI (Higher Level Skills for Industry) <http://www.hlsi.org.uk/> project. The Repository is being re-branded as LearnBuild and the companion authoring software as LearnBase. Steve Walmsley, is now a director of Kainao Ltd, the company which seeks to further develop the product and sell it on a commercial basis.

After a brief explanation of what is an integrated system, Steve looked in more detail at Learning Objects Repository. Main criteria:

- Ensure simple searching of content
- Ensure simple content creation
- Ensure simple content publication to LMS
- Encourage re purposing and re use
- Optimise Learning resources and Faculty knowledge
- Quality assure content

Steve then spent some time demonstrating the actual workflow: basically it is create, publish and "quality assure". It seemed very straightforward. The tutor can use Word (with extra tool called LearnBuild)) to create the resource. They import the template and type in the information. They can access internal resources and import them. They create the package and using a metadata entry wizard, metadata is added. There are five pieces of information needed for the metadata: title, description, subject, level and author. The package/resource is uploaded/published.

Steve then explained how LearnBuild can work within BlackBoard (and other VLEs). He finished with a demonstration of a tutor logging into blackboard and searching for resources within the repository.

The speakers are gave very interesting talks which clearly gave the delegates "food for thought". A question/answer session followed which generated some discussions including questions on licences issues, IP access etc

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