

Date: Fri, 09 Jun 2006 18:32:31 -0400

From: Jim Farmer <jxf@immagic.com>

Subject: Re: Learning Design in Sakai

To: "Feldstein, Michael" <Michael.Feldstein@suny.edu>

Cc: markjnorton@earthlink.net, Fred Beshears <fmb@berkeley.edu>, pedagogy@collab.sakaiproject.org, Ian Boston <ian@caret.cam.ac.uk>, "Jason R. Cole" <cole.jason@gmail.com>, "Tattersall, Colin" <Colin.Tattersall@ou.nl>, Andreas Wittke <wittke@fh-luebeck.de>, Robert Sherratt <R.Sherratt@Hull.ac.uk>

EML is the acronym for Educational Modelling Language developed by Open University Netherlands. The IMS Learning Design specification was based on this experience.

In January I had the opportunity to discuss Learning Design implementation with Colin Tattersall, author of an excellent, though difficult, text "Learning Design : A Handbook on Modelling and Delivering Networked Education and Training," He expected it would take 3 to 5 years before learning design was widely used. He expected it to be used first by those who "engineer" their learning materials--institutions such as Open University UK, Sakai partner Lubeck University of Applied science, Athabasca University, and Open University Netherlands. Colin expected some authoring tools to be developed that implemented parts of learning design--the parts appropriate to a specific pedagogy. But the materials could be presented in any LD compliant learning system. Note the implied asymmetry. He also commented about the need for simple authoring interfaces. As these more advanced authoring with simpler interfaces become available, faculty would, over time, use these tools if appropriate to their discipline and method of teaching. Note the authoring tools could be discipline specific; the difference between authoring problem sets and, say, English composition.

There is substantial support in the UK, especially in Further Education. In 2002, CETIS' Wilbert Kraan reported: "In her keynote speech to the IMS Open Technical Forum, Professor Diana Laurillard, [formerly from Open University UK and now] the head of the e-Learning Strategy Unit of the UK Department for Education and Skills (DfES), called for the widespread adoption of Learning Design. The specification still needs to be formally adopted by IMS, but was hailed for its ability to allow easy re-use of successful learning models, without straightjacketing adopters into one single pedagogical approach."

There is substantial evidence that sequenced instruction is effective, especially for classes with diverse preparation for an introductory course. The Pew Consortium has reported on some implementations; the U.S. Secretary of Education's Commission on the Future of Higher Education heard testimony from other work as well.

So learning design is less applicable to a Sakai partner such as the University of Cambridge than it would be many of the Moodle users focusing on introductory courses.

Open University is financing the further development of Moodle to include Learning Design through Level C (see www.immagic.com/eLibrary/GENERAL/IMM/I060416F.pdf for more about OU plans). LD is expected to be available at OU summer 2007. "Using Moodle" author Jason Cole is the OU UK leader. OUUK and OUNL do have authoring tools that could be adapted to Learning Design. It is interesting to note that OU UK has received a major

grant from the Hewlett Foundation to make their course materials available without fee. Though there is no public record, likely Learning Design will be used. OU UK materials are used by about 20 million students not including those in China (I don't know the status of China now, they used OU television courses a decade ago). Whether this approach to online learning will be used in the US or not may depend on how higher education responds to the Commission recommendations.

Yes, the original workflow specifications came from the UK though the Workflow Management Coalition moved from the UK to Florida several years ago. The first reference model was introduced in 1995. WfXML was widely used for document imaging and subsequent processing as business began to scan documents upon receipt and do subsequent work from online images. WPDL is more recent and focuses on process description. As Web Services became more frequently used, IBM and Microsoft developed BPEL solely to sequence Web Services. For the past three years WfXML is working with BPEL to achieve interoperability or convergence.

In the December 2001 discussions at Indiana University, they commented they elected to develop EDEN workflow because at that time BPEL did not support sequences that required a manual process; their business systems sequenced approvals--a manual process. BPEL came from IBM, BEA Systems, Microsoft, SAP AG, and Siebel Systems, but has recently been given to OASIS as WSBPEL. In August of 2005 IBM and SAP suggested BPEL for people to extend the language to cover the cases like those of Indiana.

The University of Hull used BPEL for sequencing instruction in a JISC project. The final report (<http://www.hull.ac.uk/esig/downloads/Final-Report-Assis.pdf/>): "Underlying this broad aim were a number of technical and pedagogical objectives, the most significant was the production of the Player. Using Web Services based technologies and standards, the Player has demonstrated the possibility of realising a Service Oriented Architecture, such as the JISC ELF [eLearning Framework], via the integration and orchestration of a number, in this case three, of discrete, independent, Web Services based services. Using Business Process Execution Language for Web Services (BPEL), Web Services Definition Language (WSDL) and Simple Object Access Protocol (SOAP), the Player presents sequences of content to learners by communicating with the Content Package service for the structure and material, for the Simple Sequencing service for decision making and the QTI service for the rendering and response processing of assessment items" Hull gives credit to prior work: "Assis built on the work of two, first round, JISC e-Learning Framework projects, ISIS (University of Hull) and APIS (University of Strathclyde), and the work of Stanford University, one of the four core partners for the Mellon funded SAKAI project, on Samigo."

There has been some speculation among the University of Hull staff whether interoperability of BPEL + extensions could support IMS Simple Sequencing or part of the Learning Design. And to the type of interface needed for faculty authors.

If there is substantial learning materials that use Learning Design, if there are authoring tools that are intuitive to faculty, and if there is a focus on learning effectiveness, likely Learning Design will become key to wide-scale interoperability.

Perhaps LD should be implemented first by the major authoring institutions, then see if it can be more widely implemented for faculty authoring. OU UK and OU NL will be able to provide guidance from their experience.

I hope this brief history provide some perspective.

jim farmer

Feldstein, Michael wrote:

>Absolutely. EDML, I think is what they called it originally. (Or something like that.) But if you look at the majority of the authoring tools (e.g., the RELOAD LD editor), they're not designed for teachers. Instructional designers, yes. But teachers, no. So this is a classic case of the gap between a technical standard and the real-world needs that inspired it. The only way to fix it is through prolonged periods of creative abrasion between theory and practice.

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>-----Original Message-----

>From: Mark Norton [mailto:markjnorton@earthlink.net]

>Sent: Fri 6/9/2006 10:43 AM

>To: Feldstein, Michael

>Cc: Fred Beshears; pedagogy@collab.sakaiproject.org; Ian Boston

>Subject: Re: Learning Design in Sakai

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>Feldstein, Michael wrote:

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>>Fred, you make an important point regarding the standards here. As noted by several in this thread, IMS LD is a technologist-driven standard.

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>Purely for historic accuracy, while LD was developed by technologists,

>it based it's work on extensive experience with representational

>learning design, especially from the Open University in the

>Netherlands. IMS-LD is a distillation of pedagogical experience.

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>- Mark Norton

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>[see attachment: "message0.html", size: 1706 bytes]

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>Attachments:

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>message0.html

><http://collab.sakaiproject.org/access/content/attachment/512da2e1-b4cf-499d-000c-65ef15e1aef4/message0.html>

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