Canadian Journal of Learning and Technology / La revue canadienne de l’apprentissage et de la technologie, V28(3) Fall / automne, 2002

Canadian Journal of Learning and Technology
Volume 28(3) Fall / automne, 2002
Book Reviews / Revue de Livres

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The Instructional Use of Learning Objects
Edited by David Wiley

Published in 2000 in e-book format via Open Publication License and in 2001 in print format the Agency for Instructional Technology and the Association for Educational Communications and Technology ©2002 by individual chapter authors.


A review and dialogue with David Wiley by Brian Lamb

David Wiley wrote the book on learning objects. Really, he did. When The Instructional Use of Learning Objects first appeared online in 2000, it staked its claim in a wilderness overrun by dot-com era hype, ill-defined concepts, and a pervasive sense of mystification. While much has changed the past two years, the book remains the most substantial and comprehensive treatment of the subject available.

At the time, the Learning Object Metadata (LOM) working group was focused on the technical barriers to interoperability. Financial windfalls were promised by a learning object economy, and visions of "computer agents" able to "automatically and dynamically compose personalized lessons for an individual learner" (quoted in Wiley, 2002, 8) danced in the heads of venture capitalists. While work proceeded rapidly on technology and metadata standards, pedagogues and instructional designers found themselves in the role of customers and consumers, not architects. As Wiley writes in the book's introductory essay, there was "astonishingly little conversation around the instructional design implications of learning objects." (8)

The contributors to The Instructional Use of Learning Objects are each concerned with the educational implications of object-oriented instruction. The range of topics and contributors reflect Wiley's stated desire for a dialogue around LO's that does not privilege one particular approach, making them "compatible with practically any instructional design theory." (19) The common impression of LO's as mere containers of
content has raised fears that their use implies a transmission model of instruction, and Wiley is keen to counter this misconception by stressing their "theory neutral" nature. One section presents three articles on constructivist applications, balanced by another section featuring David Merrill, a well-known critic of constructivist instruction.

If Wiley's book succeeds in bringing theorists to the table, it is not without its flaws. The book has something of a patchwork feel; some articles are rigorous and scholarly, while others read like adapted conference presentations (one can almost see the PowerPoint slides). It is also marred by occasional editorial glitches, such as its treatment of the "LEGO" model. While Wiley's introduction effectively demolishes this disturbingly ubiquitous metaphor, arguing that it is "stuck in the idea that anyone should be able to open a box of learning objects and have fun assembling them with their three year old", the concluding piece by Wayne Hodgins uncritically proclaims what he describes as his own "LEGO epiphany." (286) The articles in the "Implementation War Stories" section would be enhanced by more concrete recommendations for the actual use of learning objects, and readers who pick up The Instructional Use of Learning Objects hoping for answers to the practical dilemmas of LO implementation (meta-tagging workflow, selection of tools, intellectual property rights, funding models) will be disappointed.

But The Instructional Use of Learning Objects does not claim to be a handbook for LO implementation. It does succeed in bringing the needs of educators into play, and its importance to the development of an inquisitive and critical culture around learning objects is worthy of recognition.

The book also marks the emergence of David Wiley as the academic figure most prominently wrestling with the challenges and the promise of learning objects. His energy and dedication to the subject is inspiring and infectious, and it was with characteristic openness that he agreed to exchange email discussing his book, the enduring barriers to learning object use, and what the future might look like.

Review Editor's Note: In 2002, Brian Lamb and David Wiley conducted an e-mail discussion of Wiley's book, for CJLT. The letters below are published with the permission of both, and continue the conversation that is this book's review.

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To: David Wiley, Utah State University
From: Brian Lamb, University of British Columbia
Subject: Objective or Objectified?

David,

Greetings from Vancouver. I want to thank you for agreeing to this epistolary exchange. I've always enjoyed getting your thoughts on learning objects and other issues, and I expect to have fun. Whether the result ends up resembling a Platonic dialogue or a particularly violent episode of CNN's Crossfire remains to be seen.

I attach my review of the book, and before I begin throwing questions out, I invite you to take advantage of a rare opportunity for an author to respond to a critic. If I've been unfair to the work of you or your fellow contributors, by all means offer up a scathing rebuttal.

I'll be discussing more specific concerns in my next letter, but for now I'll simply ask you to describe the context in which you put the book together. Did you find that the novelty of your subject presented special
problems to its creation? If you were to begin this book today, would you have done it differently? Have educators answered the call and entered into meaningful collaboration with technologists on the implementation of LO's?

I hope all is well for you and your colleagues at Utah State, and I look forward to learning from you during this process.

Regards,

Brian

*****

To: Brian Lamb, University of British Columbia

From: David Wiley, Utah State University

Subject: Subjective or Subjectified [sic]?

Thanks for the invitation to talk about learning objects!

As for your review of the book, I can only `Amen' the positive remarks you've made and acknowledge the criticisms. =) I'll agree with two of your criticisms and deflect a third.

As for the patchwork feel of the book and the range of scholarly rigor, this is partly representative of the diversity of the dialogue in the field, and partly representative of my inexperience as an editor. There were and are a wide range of voices involved in the discourse around learning objects. Some of the more popular voices have less scholarly contributions to make, but I felt some of them had to be included in the book for the sake of legitimacy. Should the editor of a compilation be more concerned with legitimacy than quality? Probably not; but it was my first book, and I had the normal parental concerns about the success of my first-born.

Second, the book certainly does not answer the day-to-day questions of instructional designers in a world of learning technology standards. But that was never its purpose _ the book was designed as a discourse-catalyst. And it continues to serve that purpose two years later.

I will completely disagree with your criticism of my handling of the LEGO metaphor. I believe an editor's job isn't to make opinion uniform among his authors _ his job is to make their opinions speak with clarity through their writing. I hope the precision of our disagreement rings clear. I think this kind of diversity is what makes a book, or any other collection, strong.

As for the type of discourse the book has helped catalyze, in February of 2002 BYU and USU co-sponsored a meeting of instructional designers and standards folks with a meeting title ripped straight from the book's opening chapter. The opening of the dialogue was very encouraging. The content of the dialogue was less encouraging, for two reasons. First, it seems that most instructional designers are interested in replicating what they already do in a learning objects world, and nothing more. There is very little interest in pedagogical innovation. Second, it seems that 95% of people are interested in the interoperability of objects between LMS's, and not the reuse of objects across instructional contexts. The careful observer will note that these are basically the same problem.

Cheers,
To: Brian Lamb

From: David Wiley

Subject: Designers and contenters [sic]

The LEGO metaphor isn't entirely without place. But learning objects articles and presentations are starting to sound like a piano with only one key. And if that piano does have another key, it must be "learning objects = behaviorism."

People who assume that learning objects can only be used in one manner just lack any creativity. Learning objects dictate an instructional approach as much as textbooks require a teaching model based on the printing press. People think that the form of their content mandates their instructional approach. It is true that one approach may seem most obvious given a certain content form, but this is not a function of the form it's a function of the designer's previous experience. Pedagogical approach isn't dictated entirely by content. The designer picks the design (hence the name). Otherwise we'd all be contenters [sic].

The standard LEGO model of automated learning object assembly can meet a certain set of instructional needs, but we need to explore additional models. The typical model goes like this: "Teachers are expensive. If we can un-bottleneck our distance education programs by replacing the teacher with a real-time learning objects
assembling computer, we can either make a lot more money or bless many additional lives with access to educational opportunity (you decide)." But a pedagogical model that removes all social interaction from the learning process flies in the face of everything we know about the ways people learn everything but rote knowledge. Specifically, we need to be exploring models that provide more human dialogue, not less. We need lots of clever people figuring out what really powerful, completely unforeseen things the learning objects approach might enable.

Because we've never had access to zero-cost copies of reusable instructional materials in the past, there has been no reason for either a science or art of reusing existing materials in unintended learning contexts to develop. Figuring out strategies for reusing these resources effectively will require innovative thinking about the models we use to design our instruction. That's why I said that "innovative pedagogy" and "reuse across contexts" are really the same.

Insert reusable signature object here,

David

*****

To: David Wiley
From: Brian Lamb
Subject: Open source learning?

Before we wrap up this exchange I'd like to explore elements of your work that promise fresh thinking about learning objects. Although you are best known as a theorist of instructional design and LO's, you are also very active in the open source movement (www.opencontent.org). Are these distinct interests, or are there intersections between open content and learning objects that point to new directions?

I think I can partially guess your response. You let your geek flag fly in your most recent paper, "Online self-organizing social systems: The decentralized future of online learning" (available at http://wiley.ed.usu.edu/docs/ososs.pdf), which posits "OSOSS's" such as Slashdot (http://slashdot.org) and Kuro5hin (http://kuro5hin.org) as legitimate learning communities in their own right, distributing digital resources not via central repositories holding meta-tagged objects, but instead promote discovery through "community queries" and collaborative problem solving.

It's hard to imagine a model more antithetical to how people talk about the new generation of learning content management systems, which seek to automate the deployment of learning objects within pre-structured contexts. Are LCMS's and OSOSS's fundamentally at odds with one another? Can they co-exist? How might these approaches perform in, for instance, an institution of higher learning?

Thanks so much for engaging in this dialogue. I look forward to seeing how your ideas are received, and eagerly anticipate further developments.

Over and out,

Brian

*****
To: Brian Lamb
From: David Wiley
Subject: Closed source learning?!?!?!!

As an educator, I have a hard time imagining anything less compatible with teaching than draconian restrictions to "intellectual property." Teaching is about helping another gain, not about withholding from them. Can you imagine a course for which students are required to sign non-disclosure agreements? I've had two.

My interest in open source content actually came prior to my interest in learning objects. Being from West Virginia, one of the most rural areas of the U.S., I grew up watching people lack access to educational resources because they lacked access to financial resources. After being a Linux user for a few years, I realized that the same development model and sharing attitude could make educational resources freely available as well. It was one day in my webmaster's office at Marshall University that in 1997 that I realized what the RIAA now knows too well: digital educational resources could not just be free to use, they could also be free to copy and redistribute. So my interest in learning objects is completely a function of my overarching agenda of making high quality education available for free.

I'm currently working on a three-pronged model of learning objects use: automated, by-hand, and decentralized. The first prong corresponds to popular notions of learning objects use: a group of objects pre-selected by an omniscient designer and delivered according to a set of sequencing rules by an automated system. This model is great for teaching stuff at the bottom of Bloom's or Merrill's taxonomies; facts, concepts, procedures, etc.

The second prong also works in formal education but is more amenable to higher-level learning, and is appropriate for graduate schools and other settings where the generation of new knowledge or the collaborative solving of ill-defined, complex problems is desirable. This approach to use involves a designer identifying a problem and an initial configuration of learning objects that provide some or all of the information necessary to solve the problem. This configuration of resources acts as a seed crystal, onto which a group of learners attach annotations, references to other resources, further annotations, etc., in the problem-solving or knowledge-generation process.

The third prong is OSOSS's, and as you have implied these don't fit well into formal education due to their complete decentralization. They do provide powerful maintenance learning opportunities to their members, however, and function like an extended community of practice. (By the way, the acronym comes from the Japanese "osu," which loosely translates "what's up?")

So that's it cradle to grave, simple to complex, free education. Not much to ask for, is it? Thank you for this opportunity to share the feelings and thoughts that mean so much to me.

Wishing you and everyone world peace,

David