

## Mashing up the Once and Future CMS

In a *Chronicle of Higher Education* article published last year, a writer bemoaned the faddish adoption of the latest ideas or novelties in higher education and argued that those of us in academia should not implement these oft-ballyhooed innovations until there is some assurance that they actually work and make a difference.<sup>1</sup> But those who have been around the IT block know that by contrast, the dynamic is all too often: “He/she who hesitates is lost.” Many of our constituents arrive on campus expecting the latest and greatest. Where would we be if we waited for IEEE standards to completely firm up before implementing gear based on them? Standing in front of faculty committees and being taken to task, that’s where. To innovate or wait: that is the question confronting IT managers on an almost weekly basis.

A good example of an IT innovation standing at precisely this threshold is the course management system (CMS). Given all the buzz that surrounds the Web 2.0, students’ immersion in it, and the current focus on emphasizing the learner, doesn’t it make sense to move at full speed and implement Web 2.0 features into the CMS? Isn’t this a grand opportunity and challenge?

But how do we know that providing Web 2.0 features such as social bookmarking or Facebook-like functionality will actually improve learning? We are back at the conundrum posed in the *Chronicle* article: rush in, or wait until we know what works? Perhaps framing this in such either/or terms is itself the problem. Perhaps the question instead should be how best to move in this direction yet avoid the faddish false starts that the *Chronicle* writer cautioned against.

### The Web 2.0 and the Learning Paradigm

In recent years, there has been much discussion of constructivist learning theory and how research over the past several decades supports this theory. In a nutshell, this theory holds that learning is strengthened, deepened, and made more effective when it is social, is engaged, provides formative assessment (as opposed to just summative), is relevant (tying content to students’ concerns), and offers learners multiple paths. But perhaps the single most important component

of constructivist learning theory is that learning happens best when students are active—not merely taking notes in lecture halls but writing, thinking, experimenting, creating, and devising.

If we “mash up” constructivist learning theory and the Web 2.0, we can harvest some helpful insights concerning the future of the CMS. The Web 1.0 models the traditional, unilateral publication formats. It assumes a more passive consumer of information, one who receives or buys content (such as songs, books, and weather reports) much in the way that

TABLE 1. CHARACTERISTICS OF WEB 1.0 AND WEB 2.0

WEB 1.0	WEB 2.0
Publishing	Participation
Content management, presentation	Content reappropriation (e.g., mashups)
Individual, large-scale Web sites	Blogs, wikis
Directories	Tagging
Users observe, “listen to” Web sites	Users add value, co-create
Subscription services	Low-cost or free services
They, the media (control held by a few)	We, the media (we create the media)
Macro-content	Micro-content
Authority is key	Collective decision-making
Versions and major releases	Continuous micro-enhancement
Creator defines content, design	User defines content, design (e.g., Web desktop)
Taxonomy	Folksonomy
Value indifferent to amount of usage	Value increases the more it is used
Business model	Blogosphere
In author we trust	In users we trust
Harnessing of authority’s intelligence	Harnessing of collective intelligence
Best-sellers	The “Long Tail”
Control	Cooperation
Example: <i>Encyclopedia Britannica</i>	Example: <i>Wikipedia</i>



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one receives goods from a store. The Web 2.0, by contrast, with its folksonomies, bookmarking, multilateral contribution of content, and mashups, is a far more active environment. Opportunities abound for content generation, content sharing, content markup, and content repurposing. In short, the Web 2.0 models the very active engagement that is central to the learning paradigm.

A good way to understand the two models is to compare their characteristics, as shown in Table 1.

If one studies this table long enough, a gestalt emerges: the Web 1.0 looks uncannily like the teaching paradigm, whereas the Web 2.0 resembles the learning paradigm. As normally happens when a technological innovation begins to be adopted, the Web 1.0 imitates the practices of the past (much as the initial typefaces designed for the printing press mimicked handwriting). It takes some time for new practices to be invented, and the Web 2.0, I suggest, marks this new phase of the World Wide Web. In all respects, the alignment of the Web 2.0 toward or around the learning paradigm is striking and compelling.

When one lines up all of these factors (active engagement, support of the learning paradigm, and the movement of Net

Gens to the Web 2.0), a compelling case could be made for evolving the CMS in precisely this direction. The case is further strengthened by some of the recent research in this area.<sup>2</sup> Perhaps we could formulate the argument as follows: the Web 1.0 is to the Web 2.0 as the CMS 1.0 is (or should be) to the CMS 2.0.

### Layering the New atop the Old

Because this conclusion is so compelling, it is also a danger. One might be tempted to think that the goal is to replace the CMS 1.0 with the CMS 2.0. But to envision the task in this way would be to fall prey to the faddishness that the *Chronicle* writer complained about.

Instead, it would seem prudent to think of the CMS 2.0 as adding a new layer to the current CMS. The limitation of the CMS 1.0 lies in its “allegiance” to the teaching paradigm. The basic unit of most CMS applications is the course. Students often have no individual “space” that is not tied to a course in which they are enrolled. The opportunity lies in students being able to engage in activities and create content that lives *outside* the course site—in their own space, a space that is a resource and staging ground for their work across their entire academic career.

A new CMS 2.0 layer could enable

learner-centered capabilities. These might include the following Web 2.0 features: mashups, the ability to find content with the CMS 2.0 and repurpose it in new learning contexts; folksonomies and other organizations that cross the boundaries of courses and even years; facebooks, not portals; social note-taking and collaborative composition tools (e.g., Google docs native to the CMS). There is no reason why the CMS should not support generations of students collectively working to develop tagged content resources, much in the way of *Wikipedia*.

Still, the Web 2.0 features that form the new layer should not come at the expense of the management features that have led to such widespread adoption of the CMS. The impressive adoption rates of the CMS at institutions clearly indicates that the CMS 1.0 is doing something right. Not since the days of timesharing on mainframe computers have we had so many faculty and students “huddled” around a single “campfire.” In addition, there are many important learning tools already operating in the CMS 1.0.

The goal is not to replace the CMS 1.0 with the CMS 2.0 entirely, any more than it would be prudent to abandon authoritative resources (e.g., *Encyclopedia Britannica*) entirely and use only Web 2.0 social resources (e.g., *Wikipedia*). Rather, the trick will be to construct the CMS 2.0 utilizing the best and most useful aspects of the CMS 1.0 while adding those aspects of the Web 2.0 that address and support the grand adventure of learning.

### Notes

1. Joel Best, “From Fad to Worst,” *Chronicle of Higher Education*, April 14, 2006, p. B6.
2. The most recent is Ali Jafari, Patricia McGee, and Colleen Carmean, “Managing Courses, Defining Learning: What Faculty, Students, and Administrators Want,” *EDUCAUSE Review*, vol. 41, no. 4 (July/August 2006): 50–70, <<http://www.educause.edu/er/erm06/erm0643.asp>>. But this case is also clear in publications such as the most recent *Horizon Report*, which identified user-created content and social networking as technologies that will likely be broadly adopted within the next year. See *The 2007 Horizon Report*, published by the New Media Consortium and the EDUCAUSE Learning Initiative, 2007, <[http://www.nmc.org/pdf/2007\\_Horizon\\_Report.pdf](http://www.nmc.org/pdf/2007_Horizon_Report.pdf)>.

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