

Toolbox or Trap?

Course Management Systems and Pedagogy

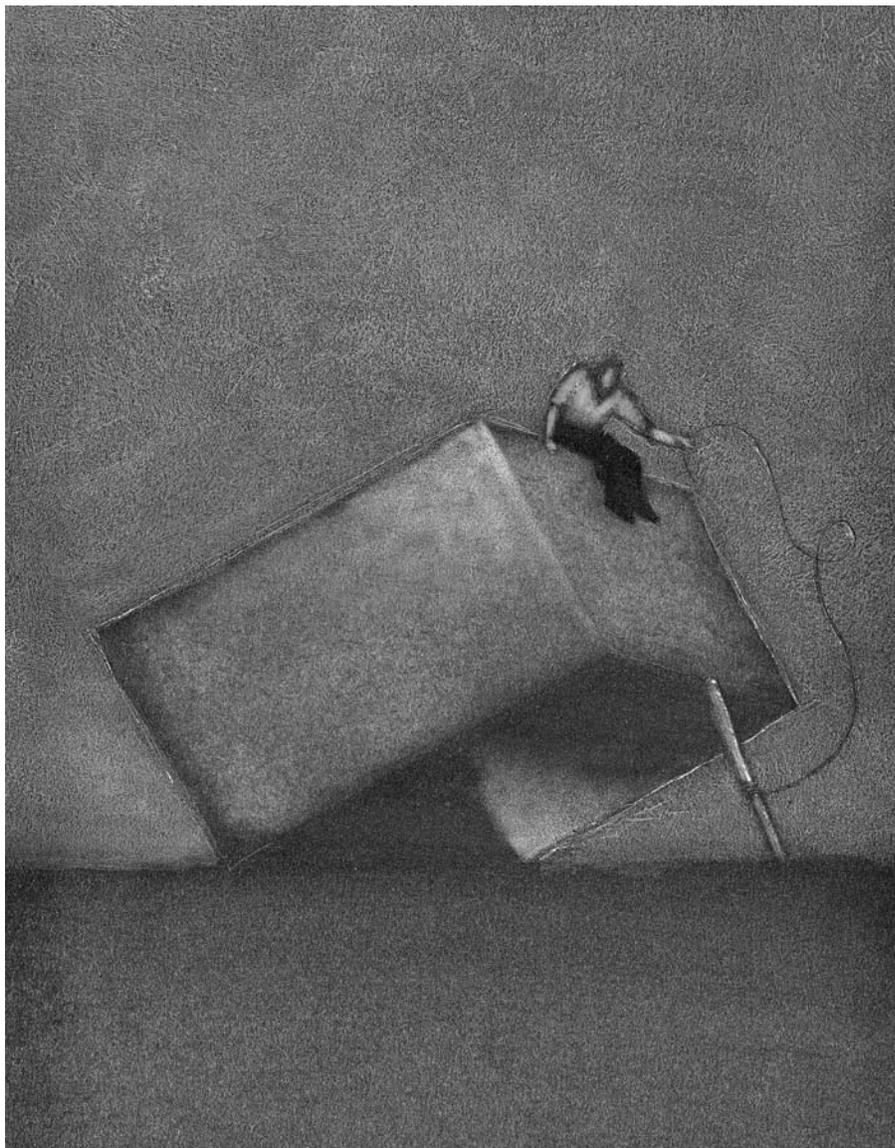
The default design of commercial course management systems limits instructional creativity and pedagogical approaches, particularly for novice users

By **Lisa M. Lane**

Creating an online class is a task of construction. A course management system (CMS) provides faculty with a set of tools, a kit to use as we build our classes. We want to construct classes according to our own pedagogy—what we know works with our learners and our teaching style. If we were building something tangible out of wood or metal, for instance, it would be silly let the tools in our toolbox determine what we construct and how we construct it. I wouldn't set out to build a Victorian dollhouse and switch to a modernist garden bench because I couldn't find the scroll saw. And yet this type of shift often happens when faculty encounter a CMS.

Institutions purchase commercial course management systems to facilitate online teaching and learning. Although most colleges began adopting course management systems after faculty innovators independently created the first online classes, integrated systems are now used for online, onsite, and hybrid courses worldwide, with Blackboard and WebCT the most frequently used commercial systems.¹

Campuses have adopted these programs on a wide scale, yet few studies have looked at how the design and use of a CMS affects pedagogy, and instructors rarely discuss how a CMS affects their teaching. With the emergence of new learning management systems and



virtual learning environments based on alternative pedagogy, and the advent of Web 2.0 applications such as blogs, wikis, and social networking, one thing has become clear: the standardized nature of integrated commercial systems is limiting pedagogy. Although particularly an issue for novice users, it can even pose problems for experienced online instructors.

The Toolbox

By virtue of their intent and design, course management systems impose limitations on instructional creativity and approach. They aren't designed to encourage innovative teaching. As products marketed to institutions to help them integrate resources, they are designed along the lines of inventory control or commercial enterprise applications. Decisions about which learning software to use on campus are often made by campus technologists and administrators rather than faculty. Because their purpose is to manage resources (content, class enrollments, assessments), the applications are based on managerial and administrative tasks centered on instructor efficiency: gradebook, test creation, threaded discussion, rosters, and instructor-student messages. Indeed, many instructors never move beyond these basic uses, despite the many interactive features course management systems now offer. Why?

The main limitation is the default structure of the typical commercial CMS. The preset organization encourages novice instructors to "plug in" their content under the appropriate category instead of effectively translating their individual teaching styles into an online environment. The construction of the course syllabus, a natural beginning point for most instructors, is a good example of how the software imposes limitations. When they first enter a CMS, new instructors see the default buttons of the course menu, which are based on type rather than purpose: Announcements, Course Content, Discussion, even Syllabus. The buttons link to pages that simply provide a place to upload a document,

which is exactly what most instructors do: upload a word-processed file of their in-class syllabus. It would be more natural for novice instructors to see a blank schedule in which they could create each week's (or unit's) activities. Most professors think in terms of the semester and how their pedagogical goals can be achieved within the context of time rather than space. The default organization of the CMS forces them to think in terms of content types instead, breaking the natural structure of the semester.

The Trap

In addition to a counterintuitive organizational scheme, integrated commercial systems have a built-in pedagogy, evident in the easiest-to-use, most accessible features. The focus on presentation (written documents to read), complemented by basic "discussion" input from students, is based on traditional lecture, review, and test pedagogy. This orientation is very different from the development of knowledge through a constructivist, learner-centered, or inquiry-based approach, which a number of faculty use successfully in the classroom. In constructivist pedagogy, the instructor's role is to provide a rich learning environment, which often includes extensive social interaction, self-assessment, and independent projects. These techniques are better supported by Web 2.0 applications or by learning management systems that encourage such pedagogy at the novice level. The more a CMS promotes traditional pedagogy, the more likely it will limit faculty creativity—and flexibility and creativity are the foundations of academic freedom and good teaching.

This is not to say that large course management systems can't be used to create constructivist or alternative teaching methods, but it isn't easy. Although a CMS can be customized to encourage constructivist pedagogy, such added "features" come at additional cost and make a heavy program even heavier. These components must be added to the Tools or Communication areas or sometimes as a separate

Scholar section. The very size and complexity of the system's structure makes it hard to learn the CMS fully, although such depth of knowledge is required to effectively combine pedagogy and technology. A savvy instructor can certainly modify the default setup if it doesn't meet her goals, renaming the course menu buttons and redeveloping each section's features. Many instructors learn to link to other sites and hide from view the features students won't use. But at the novice level, the system simply does not encourage such customization. To be able to modify the CMS to employ alternative teaching methods, instructors must have a well-developed sense of what is possible in the online environment before approaching the course design process—a perspective many do not have when they first start teaching online. When presented with a list of options, most people typically choose one option rather than question the list itself.

The Wrong Tools

There are other reasons also why instructors let the CMS dictate their teaching methods. Some faculty simply lack knowledge about online technology, which can make it difficult for them to tailor a large CMS to meet their needs. Interestingly, many instructors who teach online are not "webheads." As more instructors embrace online teaching because they are pressured to do so for evaluation or tenure reasons, fewer enter the field with complete and contemporary Internet skills. Most faculty do not use the web either extensively or intensively in their own work, and those who aren't "into technology" will quickly find themselves overwhelmed by a CMS. The complexity of the larger systems can be intimidating. Online novices tend to fear doing something wrong or "breaking" the computer. They tend not to venture deeply into a CMS to coax or "force" it to work for them.

Some are familiar with the CMS but can't translate the teaching methods they enjoy and find successful on site to the online environment. Continued

use of a CMS does not necessarily lead to more creative pedagogy or encourage more expansive use of a system's features. Even after several years of working with a CMS, faculty requests for help tend to focus on what the technology can do rather than how their teaching and learning goals can be achieved. My recent survey of instructors at a few San Diego community colleges indicated that even experienced online instructors use Blackboard/WebCT primarily for grade administration, e-mail, and presenting static content.² These results support similar findings at other institutions.³ It is tempting to invoke the 80/20 principle, with 80 percent of the features used by only 20 percent of faculty. The patterns established at the novice stage of interaction with the CMS seem to persist, with users adding in only a feature or two rather than re-creating classes to match their own techniques.

But what about statistics showing high levels of satisfaction with CMS use? Colleges that survey their faculty to see how satisfied they are with the current CMS can use high marks to avoid making changes. Faculty satisfaction rates with integrated systems can be deceptive, however. An instructor seeking an easy way to post word-processed documents, enter grades, receive papers and assignments through a digital dropbox, and run a traditional threaded discussion board will tend to show great satisfaction with using a CMS.⁴ Those who tax the system more, and use the most complex features, show lower levels of satisfaction. In addition, after spending months creating material and quizzes in a proprietary system, faculty rightly panic at the idea of "moving everything" to another system. The big systems simply do not allow for easy export, and no one wants to do all that work over again. It is much easier to simply declare satisfaction with things the way they are.

Instructors coming from a less traditional, more innovative pedagogical approach tend to recognize the difficulties with an integrated CMS and face immediate and frustrating limitations. For many faculty who use constructiv-



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ist techniques successfully in the classroom, their enthusiasm for new ideas has led them to online instruction. An instructor who is already experienced with Web 2.0 applications and "lives on the web" may feel stifled when facing the managerial focus of a commercial CMS and wonder, Why can't I do that? Those who want to offer learning experiences based in audio, visual, or mixed media formats, for example, find these systems clunky if not completely unusable for their purposes.

Building Your Way

There are, of course, alternatives to these hampering systems, and you

don't have to be a programmer or Internet expert to use them. Learning management systems designed with a more constructivist pedagogy in mind such as Moodle, Joomla, or Drupal make it possible for a novice instructor to explore pedagogical options more freely. Organization in Moodle, for example, is not by type of content but by week or topic, like a regular class syllabus. Few features are more than two or three clicks away (one of the ongoing complaints about Blackboard is how "mouse-heavy" the program is). Many of the newer systems are open source, which increases institution-wide customization options. Web 2.0 applications that encourage social construction of knowledge (Wikispaces, BubbleShare, Ning) are freely available and may provide more creative instructors with better options than any LMS currently available. Such programs make possible the creation of one's own mini-CMS, cobbled together out of programs that fit with the instructor's methodology. In these cases, pedagogy comes first—the tools can be used to build the courses we want to teach. e

Endnotes

1. Blackboard acquired WebCT in 2005.
2. Lisa M. Lane, "The Results Are In: CMS and Pedagogy," *Lisa's Online Teaching Blog*, September 7, 2007, <http://lisahistory.net/wordpress>.
3. Glenda Morgan, "Faculty Use of Course Management Systems," key findings (Boulder, CO: EDUCAUSE Center for Applied Research, 2005), May 1, 2007, pp. 1–6, [http://www.alt.usg.edu/research/studies/cms.phtml](http://www.educause.edu/ecar; and Hillard Gastfriend, Faculty Use of Course Management Systems Survey: System Aggregate Report (Atlanta: Advanced Learning Technologies, 2005), http://www.alt.usg.edu/research/studies/cms.phtml).
4. Tufts University Information Technology Services, Blackboard Survey—Spring 2006, <http://ase.tufts.edu/its/blackboard/bbsurvey2006.htm>.

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