# **New Directions for the LMS**

## Scenario

The college where Duane works as director of instructional technology is planning to replace its learning management system. The current LMS is 10 years old, and it no longer meets the needs of many members of the campus community. Over the years, some faculty have used blogs or other tools to serve as an LMS, and other faculty have chosen to use the LMS only for class rosters.

Duane chairs a committee to oversee the transition to a new LMS, and that group discusses various options, including cloud and open-source LMSs. The system the group considers most promising is a relatively lightweight application that provides basic LMS functionality but integrates with standards-based, third-party tools. One of the most valuable aspects of this approach is that it facilitates the kind of extensibility and personalization that have become important dimensions of teaching and learning. Duane arranges for a pilot test and recruits about 20 faculty from different disciplines who range from early adopters to self-described technophobes. The computer science department recently introduced a competency-based curriculum, and Duane is sure to include faculty involved in that program.

The faculty work with Duane and his staff over the summer to construct a learning ecosystem based on the LMS platform they are testing. Relying on an open interoperability standard, they find a long list of tools to choose from, with more coming online all the time. When the fall term begins, the system includes services for cloud storage (for files and as an e-portfolio), e-textbooks and online tutorials (including educational games), collaborative document sharing, and online testing. Some discipline-specific tools are included, as well as services to access government labs and research stations. It all works together with very few hiccups, and even the reluctant faculty begin to see how their courses could benefit from the available tools. After classes start, tools for online advising and office hours are added, as well as an interface to a plagiarism-detection service. The system also provides the flexibility needed for the competency-based program, which is structured entirely on demonstration of mastery-including evidence of prior learning-rather than on courses and academic terms.

## What is it?

As colleges and universities began incorporating information technology into education in the 1990s, they started using course management systems (CMSs). Because those systems were designed to work within the existing structures of higher education—by and large face-to-face instruction organized around courses-they mainly handled items such as class rosters and calendars, course documents, and grades. Over time, new models of education emerged and the label "CMS" evolved into learning management system. The LMS became ubiquitous but in many ways retains its course-centric structure. Years of pedagogical developments, along with recent models that question the tenets of higher education, have created conditions in which LMSs are evolving into learner-focused systems that can better meet the changing needs of both institutions and learners.

## **7** How does it work?

Many LMSs have grown into large, enterprise systems with long lists of features, many of which do address aspects of teaching and learning. The changing landscape, however, makes it increasingly unlikely that such a system can meet the needs of institutions and learners. LMS vendors are beginning to offer tools that function more like platformssystems on which a college or university can build a learning ecosystem with tools from many sources. Central to this change is the implementation of interoperability standards. The many pieces of a learning ecosystem must be able to exchange data consistently and reliably, creating a smooth user experience. In addition, many LMSs are becoming cloud-based services, bringing the flexibility, access, and cost structures of cloud services. The LMS of tomorrow will continue to handle administrative and logistical tasks, but it is evolving to put learners at the center of what it does.

## **Who's doing it?**

In many ways, **the move toward a new kind of LMS is being led by changes in the way education is structured.** Southern New Hampshire University's College for America (CfA), known for its program in competency-based education, had difficulty finding an LMS organized around

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students and learning rather than courses. Instead, CfA adapted a customer relationship management system to function as an LMS. Major LMS vendors have begun to acknowledge these needs, such as LoudCloud, which released an LMS platform specifically designed for competency-based programs. Offerings from other vendors are also starting to reflect higher education's changing needs. Canvas by Instructure bills itself as a platform-based approach, and the company has launched the EduAppCenter, a site that supports learning applications and resources that can be combined to create a learning ecosystem. Canvas also recently introduced a mastery gradebook to support competency-based programs. A growing number of vendors-both of LMSs and of learning applications-are adopting the Learning Tools Interoperability standard to ensure that their products work with one another.

# Why is it significant? For many kinds of software, the model of a single, large

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installation or a suite of tools from the same vendor is increasingly giving way to systems composed of elements from many sources. In areas such as entertainment and office productivity, users can take advantage of a growing ecosystem of applications and devices. An LMS designed as a one-stop shop for all possible features is unlikely to satisfy the expectations of users who have become accustomed to choosing what they consider best-of-breed applications and having them work together. Moreover, an LMS that only accommodates courses and credit hours will not be able to support a growing number of educational models. LMSs will need to facilitate experimentation in how learning is conducted, recognized, and tracked across time and institutions. In these ways and others not yet known, a learner-centric LMS can better match the educational innovations in higher education.

## What are the downsides? When large software systems undergo a disruption, the path ahead isn't always clear. Some efforts will fail, and institutions will need to balance the need for innovation with the risks of a new system. Too much change or difficult changes can alienate the very faculty and students who stand to benefit most from new LMSs. Moving to a more modular, platform-based LMS has tradeoffs-some users won't be happy with those changes, while for others, the changes won't be fast enough. Finding a point of balance will be important. For vendors and other developers of LMSs, business models and cost structures are likely to change. Licensing fees for a

traditional LMS might not fit well with systems designed as platforms, and it's not clear what level of interoperability between platforms might be feasible or desirable. Finally, colleges and universities might need to cultivate different skill sets to develop and maintain these ecosystems, not to mention new skills among support staff to help faculty and students take full advantage of new opportunities.

Where is it going? As LMSs evolve, they are likely to become platform-based systems that use open standards to interoperate and exchange data with a wide range of other technologies. With a stronger focus on learners, LMSs might enable deeper engagement and collaboration between learners and instructors, and a new generation of LMSs should allow colleges and universities to build learning ecosystems that promote those kinds of interactions. Even the term "LMS" might give way to a new label that better describes their growing capability. As evidence builds for the value of such learning ecosystems, faculty who today either don't use LMSs or only use them for administrative functions might be persuaded to incorporate the LMS and related technologies into their teaching. Because they will center on students, LMSs will likely become more personalized and customizable and will need to work well on a broadening pool of mobile devices. Finally, because many analytics programs depend on LMS data, analytics programs could influence LMSs and learning ecosystems to provide the most valuable data.

# What are the implications for teaching and learning?

Developments in technology continue to influence the ways teachers teach and students learn. Meanwhile, various forces affecting higher education have led to new models for learning and new roles for institutions and faculty. MOOCs have called into question the notion of what constitutes a course, and ideas such as competency-based education and prior-learning assessment challenge the credit hour as a unit of learning. Digital badges and other means of recognizing and sharing learning enable small units of mastery and broaden the principle of lifelong learning. These and other innovations require an LMS that can get beyond semesters and courses, concentrating instead on individual learners and what they need over the course of their education and into their professional lives. LMSs that function as part of a learning ecosystem will be an important part of the changes taking place in higher education.