The 2015 Enterprise Application Market in Higher Education
Learning Management Systems
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What You Need to Know

In their early days, learning management systems (LMSs) were primarily used by large institutions as a way to build, store, and use online course materials. Over the years, however, all types of institutions have come to see the value in such technology-based course systems, which are in use at virtually all colleges and universities. These systems have enabled the growth of hybrid and online courses, as well as opportunities for asynchronous learning within a traditional course. In addition, current LMSs contribute to the availability of new data tools for advisors and faculty members.

Institutions are still learning how to maximize their investments in LMS systems. Most instructors rely on the LMS for administrative processes—creating and storing course materials, managing assignments, filing grades, and offering supplementary materials to enhance student learning—while just less than half use more-advanced features such as analytics and tools that encourage communication between students outside the classroom.

Between the underutilization of system features and the complexity and cost involved in full LMS replacements, most institutions seem content to stick with their current solution and investigate advanced features when they are included with regular system upgrades. With few plans to replace these systems in the next three years and relatively low occurrence of recent implementations, the LMS market hangs in the middle of the pack in terms of rate of change among the core information systems (figures 1 and 2).
Rate of change is an indicator of how rapidly a system area is changing. It is a composite score based on year of current implementation and on plans to implement new systems or replace existing ones. Systems with the highest rate of change typically have been implemented recently or are expected to be implemented or replaced soon.

Figure 1. Characteristics of core information systems
Figure 2. System provision and plans for change for learning management systems
Market Share

With more than 8 in 10 institutions (84%) using a solution from one of the top 4 vendors—Blackboard, 43%; D2L, 14%; Instructure, 14%; and Moodle Trust, 13%—the learning management system market is fairly homogeneous (figure 3).

Figure 3. 2015 learning management system market
**Market Shift 2011–15**

From 2011 to 2015, Blackboard Learn continued to dominate the LMS space, but other vendors in the market gained ground. Instructure Canvas and D2L Brightspace have increased market share substantially since 2011 (figure 4).

![Figure 4. 2011–15 learning management system market (top 5 solutions and homegrown)](image-url)
Management Strategy

Although just over half of institutions opt for an in-house LMS, one-third (35%) use a vendor-managed SaaS solution. Institutions with Moodle (82%) and Blackboard Learn (59%) tend to have in-house solutions. Instructure Canvas is unique in that a majority of institutions that use it (69%) opt for the vendor-managed SaaS option (figure 5).

![Management strategies in use for top 4 learning management solutions](image-url)

Figure 5. Management strategies in use for top 4 learning management solutions
Deployment Strategy

LMSs must be mobile friendly; faculty and students need to be able to access course resources at any time. Reliability and capacity are important touch points for any vendor because the LMS must handle a myriad of document types and sizes. Again, there is some diversity in the market, but most institutions (60%) use an LMS with a web-based application (figure 6). Mobile-friendly deployment strategies include the mobile app (most commonly used by Blackboard Learn) and responsive web design (most commonly used by Moodle [Moodle Trust]).

![Deployment Strategies Graphs](image)

*Figure 6. Deployment strategies in use for top 4 learning management solutions*
Case Study: LMS Evaluation at Case Western Reserve University

Today’s LMSs offer far more than content and grade repositories. They can also help faculty and others create interactive, customized, and personalized learning experiences. Many institutions, including Case Western Reserve University (CWRU), are intrigued by the evolving LMS landscape and are taking a closer look at their current systems. With its LMS contract due to expire, CWRU’s University Technology (UTech) organization embarked on a yearlong LMS evaluation process in 2015–16. “There is a lot of excitement in the LMS world currently,” stated Sue B. Workman, vice president for information technology and chief information officer. “We’ve been with the same LMS vendor for 16 years, and we felt it was time to explore a little bit—to see if our current vendor is still the best solution at this point or whether it is time to look at a system that approaches learning management in a different way.”

CWRU has a multi-LMS environment currently, with a UTech/centrally supported LMS and a few other systems used for targeted programs, most notably the School of Medicine’s proprietary LMS and other applications used in fully online programs. One important goal for the next LMS is to move as close as possible to a single, UTech-supported system for the entire university. LMS checklist items include ease of user adoption, system expansion possibilities, mobile learning support, and assessment and data analytic capabilities. UTech recognized the importance of a good fit between the next LMS and CWRU's culture and thus worked to collect as many data points as possible during the evaluation process. Workman and Tina Oestreiche, senior director for teaching and learning technologies, discussed their experiences.

An important step in this process was to learn from others, and UTech reached out directly and through online resources to other universities who recently transitioned or are about to transition to a new LMS. Oestreiche cited several universities’ websites as particularly informative: Emory University, Indiana University, The Ohio State University, and Virginia Tech University. UTech learned a lot from the processes that other universities followed. For example, others mirrored UTech’s priorities and valued an open community to collaboratively address LMS needs.

UTech conducted an internal evaluation, too. Like all universities, CWRU has different pockets of users, and UTech used different methods to create as comprehensive a picture as possible of university LMS usage and satisfaction. They surveyed all LMS account holders—targeted by faculty, student, or staff—collecting baseline usage and satisfaction data. A powerful message from students was that they wanted more faculty to use the LMS, and they wanted to see consistency in the look and feel of courses. In addition, UTech’s town-hall meetings garnered qualitative user experience information. For example, UTech gained a better understanding of LMS mobility requirements and of how the community wishes to learn from and use the LMS.

UTech met with the academic leadership from each CWRU school to gauge their needs and comfort level with an LMS transition. Requirements varied, with the need for sophisticated
student assessment and learning analytics being a priority for some of the schools. Outreach took on special importance with the School of Medicine, in light of its desire to move away from its aging proprietary LMS. The two organizations are working together to combine a UTech-supported LMS for basic needs and third-party solutions for the school’s special requirements—e.g., different academic calendar, clinical training, and competency-based learning.

Balancing the information gathered from personal outreach are data from the LMS itself, including data about feature use and access, which revealed some interesting findings. A relatively small percentage of the campus uses the advanced features. Users of communication tools, discussion blogs, and wikis tend to cluster in the humanities and social sciences, while large STEM classes tend to use the quizzing tools and gradebooks. Schools with online learning tend to use the most LMS features.

Finally, Workman and her staff are mindful that any LMS decision involves both the current and future CWRU communities. More incoming transfer and graduate students as well as faculty have previous LMS experience. Freshmen may have a long history of personal technology use—especially with mobility—and may have used an LMS in their K–12 experience. A state-of-the-art LMS could impact CWRU interest among all of these groups.

Eventually UTech narrowed its search down to three alternatives—including the existing vendor, which passed the rigorous requirements gathering process—and gathered more vendor and user data for its analysis. “The challenge is that it is an apples-to-oranges comparison,” explained Oestreich. “The systems are very different from each other. They all do the core things but have individual strengths.” In fall 2015, each vendor presented to the LMS advisory committee. UTech piloted each LMS sequentially, so as not to overwhelm their staff resources and the CWRU community with testing. One particular challenge was faculty involvement, and UTech tried to make it convenient for them to learn about and explore the systems in order to collect a diversity of opinions. It created a project website and a sandbox site for each LMS and conducted usability studies where faculty, students, and staff completed targeted, common LMS activities to explore each system’s ease of use, feature set, and comfort level. UTech also worked with faculty to determine the transitional impact of switching LMSs—e.g., the ease of moving course content to a new system.

UTech is considering all these data points now and planned to select its LMS vendor in fall 2016. As the evaluation process winds down, Workman summarized the effort, “I am very proud of my team. We knew we needed to hit the LMS specifications, but this is not just a technical decision. It is a decision about how we are going to deliver academics as a university. Getting as much buy-in as you can before the selection is much easier than trying to sell it afterwards to the community. We were very thorough throughout the whole evaluation process and opened it up to all kinds of stakeholders.”
Conclusion

Selection of a learning management system (LMS) is an important decision that should involve multiple internal stakeholders. Leaders must recognize the importance of a good fit between the next LMS and the institutional culture. After all, almost all faculty members and students will use the LMS daily, so it must integrate seamlessly into the academics of the institutions. Working through issues of customization, deployment, and overall scalability are essential to the long-term success of any LMS choice. Planning, aligning with priorities, and establishing measurable objectives can make any LMS transition a little easier and help assuage concerns about the transition.

Acknowledgments

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Notes


2. D. Christopher Brooks, with a foreword by John O’Brien, ECAR Study of Faculty and Information Technology, 2015, research report (Louisville, CO: ECAR, October 2015).

About the Enterprise Application Market Series

The Enterprise Application Market report series from the EDUCAUSE Center for Analysis and Research focuses on data from the EDUCAUSE Core Data Service (CDS) to better understand how higher education institutions approach various information systems. Market share and system rate of change are among the metrics highlighted in this series. Information provided for this series was derived from the Information Systems and Applications module of CDS. For reports in the 2015 series, responses from 510 institutions were analyzed. Only U.S. institutions are represented in this series.