The LMS Selection Process
Practices and Considerations

RESEARCH BULLETIN | July 8, 2014

Thomas B. Cavanagh, University of Central Florida

Overview

With more than 80% of institutions offering online learning options and even more using web technologies to enhance traditional classroom instruction, the learning management system (LMS) is increasingly an indispensable, enterprise-level technology for today’s colleges and universities.1 Naturally, each institution has a unique set of instructional and infrastructure circumstances to consider when deciding on an LMS, yet all institutions face certain common requirements. When evaluating an LMS for possible adoption, what factors are most critical? What process can be used to evaluate and ultimately select a platform that will meet the common requirements of teaching and learning while also addressing the unique institutional context? This ECAR bulletin shares a case study of a recent LMS selection process and discusses key LMS evaluation considerations that can be applied broadly.

Highlights

During the spring and summer of 2012, the University of Central Florida (UCF) conducted a thorough LMS evaluation and selection process. The system that UCF had been using was being discontinued by its vendor, and the university was faced with an important institutional decision.

Online learning is a strategic imperative for meeting UCF’s access mission. UCF has an annual enrollment of approximately 60,000 students, and 76% of the university’s students take one or more online/blended courses every year. Furthermore, many face-to-face classes use the LMS to supplement traditional classroom-based instruction. It was critical that the university conduct a comprehensive LMS review to make the best decision for its faculty and students. After weighing the options, UCF elected to pursue a vendor-provided offering (as opposed to an open-source option) with external hosting. Once the university determined that this would be the most appropriate solution, three leading providers were invited to demonstrate their products and conduct pilots during the summer 2012 term.

Although conducting three simultaneous pilots while supporting the legacy LMS might not have been the first choice of the university teams involved, the timing of the discontinuation of the existing platform necessitated an accelerated review and migration timeline. As it turned out, the simultaneous pilots permitted a unique opportunity to observe products side by side “in the wild,” running real courses with real assignments, real faculty, and real students. This concurrent perspective proved to be invaluable in evaluating the platforms in comparison with each other.

Coordination and communication were the key challenges throughout the process and, to address these, specific structures were put in place, such as regular meetings, a centralized website, an overall evaluation/migration program manager, and “tiger teams” established for each system under consideration.
Communication

Communication with all institutional stakeholders throughout the evaluation and selection process was critical for success. The campus community, both near and far, had to be engaged so that all opinions were captured and informed the overall process.

The first step in the communications process was to explain to stakeholders why the institution was researching a new LMS. In UCF’s case, the institution’s legacy system was being sunset by its owner, which necessitated a search for a new platform. This message was central to helping faculty, students, and administration understand why a comprehensive evaluation and the subsequent disruption of a major system migration were necessary. This message of “why” was communicated through a variety of channels, including e-mail, live sessions during faculty workshops, and video. The core video message was placed on what became the centralized web location for all information related to the LMS evaluation and eventual migration (figure 1).

This website also served as a central location for communicating the review timeline, providing feature comparison charts for the various systems under consideration (figure 2); housing video archives of demonstrations of candidate systems (figure 3); and listing all faculty development and open lab training sessions, online survey forms for stakeholder feedback, sign-up forms for training sessions, and other important resources related to the evaluation and selection process.

Figure 1. Welcome page for UCF LMS evaluation and migration communications

UCF is Migrating to a New LMS

UCF is preparing to migrate to a new version of Webcourses@UCF. This is a big undertaking that will ultimately affect all online course sections. There is a great deal of curiosity about what the system upgrade will look like and when the migration will occur. The purpose of this site is to provide information about planning efforts, learning management system reviews, timelines, training opportunities, and additional support as it becomes available.

Why Are We Changing?

There are a number of factors influencing this undertaking. Most importantly, our current system, a Blackboard product called WebCT Vista, is being discontinued by the company at the end of 2012. In addition, learning management systems (LMS)—other terms are sometimes used, such as course management system or CMS—have evolved since we began using our current platform. Blackboard itself has a newer and more sophisticated system, called Learn 9.1. Other vendors have competing products with differing capabilities. In addition to Blackboard’s Learn 9.1 platform, we are going to evaluate two other platforms this summer, Instructure Canvas and Desire2Learn.
**Comparison Charts**

These charts provide a comparison of tools in Webcourses@UCF (Blackboard Vista) to those available in the three learning management platforms. These documents will be updated as we learn more about each system. We welcome all comments, additions, and corrections. Please submit your suggestions via the Feedback Form.

- **Comparing Webcourses@UCF to Canvas**
- **Comparing Webcourses@UCF to Desire2Learn**
- **Comparing Webcourses@UCF to Learn 9.1**

**LMS Evaluation Checklist**
The LMS Evaluation Checklist will be used to evaluate the three platforms. The checklist was initially created through a collaboration between the Center for Distributed Learning, Computer Services & Telecommunication and Faculty Center for Teaching and Learning. The checklist was sent to each vendor for completion. Additionally, the checklist will be used by the LMS evaluation teams and faculty participants.

---

**Figure 2. Feature comparison charts for LMSs under review**

**Figure 3. Video archives of LMS demonstrations**
This central communications hub was critical in ensuring a timely and consistent message about the reasons behind the upcoming change, the process, and the general decision timeline. The goal was to be as transparent as possible with all stakeholders, especially faculty. This transparency was key in establishing and maintaining trust in the process.

To solicit input from the campus community, UCF employed both push and pull strategies. The centerpiece approach was to provide a short, simple survey that anyone could complete related to the systems under consideration. Respondents could indicate whether they were faculty, staff, or students and provide their opinions about the systems under review. These surveys were distributed in a hard copy form at all of the vendor demonstrations and were then made available on the evaluation website.

In addition, the team from UCF’s Center for Distributed Learning (CDL) sent direct surveys to all participants in the system pilot, both faculty and students. Ad hoc focus groups were conducted with both faculty and students. In addition to periodic faculty focus group sessions on UCF’s main campus, CDL team members also visited regional campus facilities to meet with faculty in those locations and solicit direct feedback. The student sessions were scheduled at multiple times and locations for maximum convenience, and pizza was provided as an extra incentive for attendance.

**Product Demonstrations**

UCF knew that the accelerated evaluation schedule required a deliberate process with little margin for error. The first decision that needed to be made was the selection of the systems to evaluate. After much internal discussion, the distributed learning leadership team developed several key criteria. For example, since UCF’s distributed learning scale is significant, the team determined that a commercial provider with a dedicated team of developers and technical support infrastructure was necessary to keep up with both institutional growth and emerging trends in the national landscape. This eliminated the open-source options, even those with commercial firms that manage them on behalf of clients. The team also determined—again because of scale—that they preferred a platform solution from a provider whose primary line of business is the development and support of an LMS. This eliminated vendors such as publishers whose LMS platforms were a new or secondary corporate enterprise. These criteria, among others, happened to be the right ones for UCF at this point in time. In another context and for other institutions, the best options may be quite different.

Based on knowledge of the marketplace, conversations with colleagues, and the team’s sense of emerging trends in the higher education distance learning space, three leading commercial providers were invited to be evaluated. As the first major milestone in the evaluation process, the CDL team arranged for product demonstrations. These were important introductions of the candidate platforms to the campus community. The entire university was invited to attend, with a particular emphasis on faculty participation.

The CDL team requested that company boilerplate be kept to a minimum and that the emphasis of each presentation be on the actual features and functionality of the products themselves. These sessions needed to showcase the LMSs in action, to the fullest extent possible in a half-day format. The attendees wanted to see how high-volume features such as the gradebook, discussions, and assignments were handled within the new platforms. The providers also had an opportunity to describe any differentiators that made their product special, such as social media integration, analytics, or mobility. At the conclusion of the demonstrations, there was significant time for questions and answers (at least an hour).
Because no day or time would be convenient for everyone, each of the product demonstrations was recorded and edited into reasonable length segments, and those videos were archived on the evaluation website. Again the intent was to be as transparent as possible and ensure that no part of the campus community felt disenfranchised by the process.

**Pilot Test**

The next step in the process was to test all three systems with actual courses. In most cases, the temporary software licenses required to pilot test the systems were offered at no cost. In one case there was a nominal charge for system setup. As previously noted, it was critical that the systems be tested with real faculty, real students, and in real teaching and learning contexts. There would be no way to truly evaluate each platform’s real-world functionality in an abstracted test environment. They needed to be placed into the campus context.

The distributed learning leadership team elected to use this opportunity of selecting a new LMS to choose a platform that would not only meet the university’s current online learning needs and practices but also grow to meet future needs. Was the system extensible through standards-based integrations? Did the system leverage emerging trends such as social media and mobile technology? Could the evaluators see themselves using the system years in the future?

Of paramount importance during the pilot test was evaluating the teaching and learning usability of the systems. Faculty and students were going to spend a significant amount of time in the selected system, and they had to feel that the final selection would meet their highest-priority requirements.

From a technical standpoint, the CDL team also assessed the platforms’ ability to integrate with UCF’s student information systems (SISs), as well as connect to Shibboleth authentication protocols. The team also tested accessibility with a student with a visual impairment who provided a report on each system’s affordances and constraints.

Each platform offered different levels and configurations of administrative control. The CDL team evaluated these administrative options and attempted to determine the level of granular controls available. Other tests included third-party tool integration and publisher content.

The team discovered that testing platforms with real-world courses would expose both the good and bad in each system. However, there simply wasn’t enough time in the pilot schedule to test every possible type of class and contingency. That created some issues once a system was selected and courses were migrated; however, they were resolved relatively quickly during the first semester of full deployment. It was also important to remember that there would be no unanimously favored platform. Therefore, it would be impossible to satisfy everyone. That was why transparency in communication was so critical.

**Tiger Teams**

Key challenges associated with an LMS evaluation and implementation include stakeholder involvement in the process, organizational preparedness, quality support, due diligence to ensure that the LMS can perform the required tasks, and “effective project management to ensure that the selection process and implementation succeed.” At the center of each system’s pilot test was a tiger team. Tiger team is a term from industry and defense that describes a group of experts specially charged with solving a complex
problem or searching for every source of possible failure in a system. For the purposes of UCF’s LMS evaluation process, each of the systems under consideration was assigned its own tiger team.

Each team had an instructional designer as the team lead and included all the faculty teaching in that system for the pilot (in this case, 6–8 faculty members), LMS administrators, technical support personnel, programming/integration specialists, and IT representatives. These teams each met periodically, in some cases weekly, to facilitate quick knowledge transfer (faculty and instructional designers could learn much more about the system collectively than individually), share tips and tricks, immediately identify and troubleshoot problems, and recognize concerning trends before they escalated to impact users at scale. The process worked very effectively and facilitated a rapid yet structured review of all systems. One faculty member described these weekly tiger team meetings as “therapy sessions.”

During the course of the LMS review process and then during the subsequent migration, CDL assigned a senior staff member as the overall migration program manager. For the purposes of the evaluation and migration, this position reported directly to the associate vice president of CDL with weekly status updates in addition to the broader meetings involving multiple other staff and departments. Each tiger team lead reported to the program manager so that person could maintain wide oversight of the status of the entire project (figure 4). This program manager also served as a liaison with other stakeholder units on campus such as Computer Services and Telecommunications, Continuing Education, the Faculty Center for Teaching and Learning, Human Resources, and Finance and Accounting.

![Diagram of tiger team organizational structure]

Figure 4. LMS review tiger team organizational structure

The UCF teams met frequently to ensure that all was proceeding as intended and to proactively address any issues that might arise. The technical team met to discuss support issues and communication problems; the CDL team met with key partners such as Computer Services and Telecommunications, the Faculty Center for Teaching and Learning, and senior executives; and, as previously mentioned, the tiger teams met often to share best practices and understand features and tool usage.
Faculty were selected based on their willingness to participate, their experience teaching online, the representation of various disciplines across the university, and their ability to test systems in both fully online and blended courses, as well as whether they were assigned to teach during the summer term when the pilot was to be conducted. From the outset of the project, it was crucial that faculty understood all possible impacts of their participation when they were being recruited to pilot test systems. The CDL associate vice president met with potential faculty participants and explained that there would likely be technical uncertainty and possible glitches during the pilot test. If any faculty were uncomfortable with this level of ambiguity or if they were concerned about the potential for poor student evaluations due to either technical issues or lack of system knowledge—which might be a serious concern for pre-tenure faculty for whom low student evaluations could be devastating—they were advised they could withdraw without prejudice prior to beginning the pilots. As it turned out, however, almost all faculty elected to participate in the pilot.

In addition, faculty were made aware that, while UCF was evaluating three systems, only one would be chosen. It was possible that a system that they went to the trouble to learn and possibly appreciate would not be the final selection. Participating faculty needed an adventurous spirit and a willingness to be flexible.

**Selection Process**

Throughout the process, it was made clear that, although the eventual selection of the university’s LMS would not necessarily be a faculty decision, it would be a *faculty-driven* decision. Faculty preference would be given top priority, and the only reason the faculty’s preference would not be chosen would be related to a technical problem such as an information security hole, inadequate accessibility, or an inability to integrate with UCF’s student information systems.

A variety of strategies were used to identify which LMS the faculty preferred. As previously described, the CDL team used paper-based and electronic surveys, focus groups, and the direct input of the three sets of tiger team instructors. Several instructional designers also traveled to a regional campus location to ensure that the voice of the faculty who worked remotely from the main campus was included in the survey and focus group data. While the final determination was not unanimous, the results were overwhelmingly favorable for one particular system. Since there were no technical reasons for not implementing this system, the faculty’s first choice was ultimately selected.

In addition to faculty surveys and focus groups, student input was also actively solicited through the same strategies. Students were surveyed electronically about their impressions of the platforms and invited to participate in live focus groups. Further, a cohort of graduate teaching assistants was asked to work in all three systems throughout their GTA training and orientation program. This was the only group exposed to all three systems. Their input was extremely valuable because of that experience, in addition to their unique status bridging both faculty and student perspectives.

The campus community was informed of the LMS selection first through a *video* and then with e-mail information. The video was produced by the Center for Distributed Learning; however, the team was careful to showcase faculty participants to convey the message. The announcement was made by the chair of the faculty senate, and at least one member from each tiger team was profiled to describe their experiences. The CDL staff remained in the background, reinforcing that this was a faculty-driven decision. Each faculty member’s experience of the process was an important part of the video message and contributed to the overall goal of transparency.
Initial Deployment

After the selection was made, the initial deployment of the new LMS began with a soft launch with approximately 40 faculty members and 2,000 students. This approach permitted UCF to implement and test the new system at a certain scale while allowing the team to work out processes, procedures, and integration issues before full deployment the following semester.

Managing the review, soft launch, and full deployment across a three-semester timeline was challenging, and such an aggressive schedule has advantages and disadvantages. UCF would have preferred more time to test a wider variety of courses within the system (large courses, additional disciplines, varying pedagogical strategies, etc.) to identify potential implementation problems and develop plans or training materials to help mitigate them. On the other hand, a fast timeline meant that there would be no lingering transition issues. Any major system migration is disruptive, and an LMS is no different. It is sometimes better to “rip off the bandage quickly”—a rapid adoption and migration can be tumultuous but for a shorter duration than a more prolonged but potentially more deliberate transition.

During the initial migration and system deployment, the CDL team did as much as they could to offload faculty work. A proprietary migration tool was developed that interfaced with the LMS migration tool. A faculty member could request a course to be migrated, and the tool helped manage the workflow process within the department. This approach minimized the amount of work faculty had to do to migrate and revise existing courses within the LMS.

In addition, UCF maintained an internal Tier 1 support team. All support issues, bug fixes, and feature requests were channeled through a single centralized communications point. Not only did this expedite resolution but it also allowed the CDL team to quickly aggregate data to identify trends and issues that would otherwise not be identified if each user were reporting issues and comments independently. Plus, it eased the burden on faculty and students in that they only had to deal with a single, internal support team for assistance with anything related to online learning.

Another important component of the initial system rollout was training for faculty and students. A variety of training strategies were used, including the delivery of preexisting videos and documentation from other institutions (until UCF was able to develop its own), live training sessions, synchronous/recorded webinar training sessions, vendor-provided synchronous/recorded training, faculty roundtables, online just-in-time documentation, tutorials, and open labs. Each type of event was offered numerous times throughout the first year of rollout and beyond. CDL partnered with others on campus, such as the Faculty Center for Teaching and Learning, to ensure the widest possible dissemination of training and support.

Interestingly, students needed very little transitional assistance and were generally happy with the new system. Faculty were divided about the ease of transition. While they appreciated the quantity and variety of training available to them, those who had many years of experience teaching in the legacy system seemed to have more difficulty transitioning to the new LMS, presumably because the features and functionality they had become accustomed to using in a particular way were handled differently in the new platform. Faculty without extensive online experience seemed to handle the transition well, without much support required.
What It Means to Higher Education

It is important to remember that the LMS not only serves today’s students but also prepares the institution for the needs of tomorrow’s students. What will be the key factors in five years (e.g., the growth of social media and mobile technologies)? Although any technology platform can be changed, the level of effort to make certain changes can be significant and costly. Having to make a premature platform change because the LMS selection process lacked rigor is something no one wants to face. It is therefore critical to carefully articulate institutional needs, practices, and priorities before embarking on a time-consuming LMS evaluation process.

Platform Feature Considerations

While the following list is far from comprehensive, it is representative of the types of features and functions that most institutions should consider when evaluating potential LMS solutions.

Teaching and Learning Features

While a variety of factors must be considered when evaluating LMS options—including price, data security, self-hosted versus vendor/cloud hosted, and open-source versus commercial options—the single most important criterion in any LMS selection is how the platform supports the teaching and learning needs of an institution’s faculty and students. Determining the most important teaching and learning features should be done in an open, collaborative manner and can be accomplished using student and faculty surveys, focus groups, programmatic analysis of tool usage, queries of volumes and types of technical support calls, and other similar strategies. These data points can establish a prioritized list of features and functions that any LMS selection must support. This list can serve as the cornerstone of the entire LMS evaluation process. Areas to consider include:

- Assignment creation process
- Grading and gradebook functionality
- Discussions
- Communications
- Announcements
- Testing (regrading, moderation, passwords, etc.)
- Calendar
- Ease of changing terms

Social Media

Students and faculty live a significant portion of their daily lives online in social media spaces. A growing trend in the LMS industry is the integration of social media platforms into the institutional learning platform. Are your students and faculty interested in these sorts of interplatform connections?

When examining social media integrations, it is important that students have the ability to opt in and out of participation. They may not want their school information intermingled with their personal lives, and they might change their minds later. How integrated is each platform—for example, are course communications pushed to a student’s public Facebook timeline, or are they restricted to a private Facebook app only...
accessible by the student? In many cases, a student’s preferred communication channel is text messaging on a mobile device. Does the LMS support pushed text messages from the course?

Another consideration is that students understand that if they elect to receive course communications outside the protected course environment via text messaging, social media, or even a forwarded personal e-mail, they are exposing certain data to the risks of the open Internet. In a sense, students are waiving their absolute FERPA rights when choosing these communication channels, and they need to provide reasonable informed consent. Does your LMS enable this sort of consent for students during the process of setting up external notifications? This was a feature that UCF insisted be added to its LMS choice as a condition for adoption. The institution retained the primary channel for official university notifications—the student’s UCF-issued e-mail address—which protected vital university communications protocols. However, if students chose also to receive notifications through a personal e-mail address, text message, or social media channel, they had to indicate that they understood the privacy risks.

Collaboration

How important is synchronous communication for your institution’s online pedagogy? These synchronous interactions can be between various user types such as faculty to student, student to student, and guest to student. Will synchronous communications be a supplemental offering within mainly asynchronous courses for such interactions as online office hours and virtual guest speakers? Or will synchronous delivery be a primary instructional delivery strategy? The answers to these questions will determine the relative importance of synchronous collaboration tools and their integration into your LMS. If synchronous conferencing capabilities are indeed vital in your selection process, there are several additional questions to consider, including the following:

- Is there an embedded proprietary tool, or is it a third-party application that has been integrated into the LMS platform?
- If you already use a separate conferencing application, can it be easily integrated into the LMS through Learning Tools Interoperability (LTI) or other standards?
- Does the tool support both instructor-to-student use and ad hoc student-to-student collaboration?
- Can conferencing sessions be recorded and archived for later review or by students who were unable to attend the live event?
- How does the tool address accessibility concerns, especially for students with visual and hearing impairments?

E-Portfolios

Having the ability to capture evidence of learning is becoming increasingly critical, especially related to accreditation and assessment. As a result, most major LMS platforms offer some level of e-portfolio integration. What sorts of learning artifacts are important for your institution to capture? How well does an LMS’s e-portfolio solution enable that collection process? Is the e-portfolio restricted to a single course/section, or is it an overarching tool that enables the collection of artifacts across the entire curriculum? Can student achievements be recognized via digital badges, either as an embedded part of the LMS or through a third-party integration? Can digital badges be included as part of a student’s e-portfolio? Will the e-portfolios remain accessible to students after they leave the university, so that they can be shared with various stakeholders such as potential employers or graduate/professional schools?
Can students craft different versions of a public portfolio targeted at different audiences? Many institutions use an external e-portfolio platform. In these cases, it is also important to confirm that the e-portfolio can be properly integrated with the enterprise LMS platform.

Analytics

The subject of analytics is too large to be addressed in detail in this bulletin. However, a careful review of embedded analytical capabilities should be part of any LMS review in today’s landscape of big data in higher education. The LMS is one of the richest sources of institutional data available to help identify students at risk. Every click, every interaction, and every conversation is recorded. These data can be leveraged to identify struggling students before they reach an unrecoverable point and enable automated (and manual) intervention strategies to help them get back on track. Today’s LMS platforms should be able to leverage the data they collect in the service of teaching and learning. What data are available? How are data reported? Are there dashboards or other reporting interfaces? What sorts of interventions are possible? Can you extract data easily so that you can run your own analyses on them? Simply delivering content is no longer sufficient in today’s digital learning environment. The enterprise LMS platform must make use of the data it collects in meaningful and impactful ways.

Rubrics

Many LMS platforms now include integrated rubric tools. Assignments can be created alongside an online assessment rubric and students can clearly see how their evaluation will be conducted. Faculty can often grade, to a fairly granular level, each element of the rubric, offering specific comments related to specific elements—as opposed to a general comment on the whole assignment. Besides representing best practices in instruction, as with e-portfolios rubrics can also be a valuable asset in accreditation. With a growing emphasis by accreditors and policy makers on assessments and outcomes, any LMS under consideration should probably have a robust rubric functionality.

Mobile Options

It is important to recognize that, increasingly, students and faculty will be accessing the LMS on devices other than a traditional desktop or laptop computer. Tablets are currently outselling laptops, and smartphones have become ubiquitous on college and university campuses. According to some estimates, 98% of students carry a mobile device. More than 30% of them do not go more than 10 minutes without using it. Most students carry more than one mobile device, including cell phones, tablets, and laptop computers. Ignoring this user-driven trend toward mobility would be a risk when evaluating a new LMS.

What sort of mobile support does the LMS offer? Is it primarily a “consume” mobile strategy or is there the ability to also produce content for either faculty or students? What about the ability to take exams and upload assignments? Are there specific apps for iOS and Android, and, if so, is there a web version for other operating systems? Mobile LMS options are no longer a nice-to-have option but are a requirement in today’s mobile-centric society.

Multi-Institution Support

Each institution has its own structure and organization. The LMS needs to accommodate that structure to serve the varied needs of all LMS users. For example, there may be a need to establish separate virtual
“organizations” for each college in a university. Or, perhaps your institution needs a separate LMS organization for a medical school. For many colleges and universities, it makes sense to establish a separate and distinct LMS instance for the continuing education function because those students are a completely different population from the mainstream student body.

The LMS should enable these sorts of permeable administrative boundaries, also known as multi-institution support. If certain administrative rights need to be granted to specific individuals in these subaccounts, can roles be customized, and how granular are the controls? Which settings must remain global, and which can be changed/managed at an organizational level? Can integrations be customized? For example, if student rosters are populated from automated SIS uploads, can the source of those uploads be different for different institutional organizations, such as a medical school or continuing education? It is worthwhile to consider how the institution is structured, the centralized or decentralized nature of LMS administration, and whether institutional requirements can be met when evaluating potential LMS solutions. Multi-institution support is an area that should be included in any platform pilot test.

Vendor vs. Open-Source Solutions

Once the key teaching and learning priorities are identified, one of the first purely technical questions that an institution should answer is whether an open-source or a vendor-provided solution is preferable. Each approach has advantages and disadvantages, and the line between the two can be blurred with hybrid solutions in which a vendor hosts and manages an open-source platform on an institution’s behalf. One key to keep in mind, however, is that while the open-source platforms may be free to license, they are not free to operate and maintain. You will need your own hardware, staff, and related resources to manage a self-hosted, open-source platform.

Hosting Considerations

If you choose a vendor-provided solution, you will need to decide whether you will host the platform yourself or outsource hosting. If you choose to outsource hosting, you will need to consider the pros and cons of managed hosting versus cloud-based services. Regardless of which type of solution you believe will best meet your institutional needs, you must ensure that you are comfortable with the LMS security, uptime (most hosted agreements specify a 99.9% guarantee), performance, update and maintenance schedule, disaster mitigation and recovery plan, and load balancing (especially during peak times such as a semester start).

Security

While teaching and learning functionality should be the primary driver of any LMS selection, you cannot overlook the importance of adequate information security. As part of the review process, especially for systems that are hosted, make sure that you are comfortable with the system’s (or partner’s) security policies and procedures. If a commercial vendor, what is the company’s staffing plan to ensure adequate support, and do they conduct employee background checks? What disaster recovery and business continuity assurances do they provide, and how do they ensure their ability to deliver on them? Information security also includes physical security—how are the physical assets holding your digital material protected? Other security topics to examine include accounts management and access control; patch management; network infrastructure; remote access and VPN; firewalls; and malware controls.
A security failure can be disastrous. It will directly impact the institution’s core teaching function and could also result in serious legal ramifications. Each institution will have varying levels of expectations and risk tolerance related to software security. You must ensure that any system you consider can meet your requirements, and an unacceptable security review should be sufficient reason to strike a potential LMS from your list of candidates.

**Pricing Considerations**

Although price is always an important criterion in any significant technology purchase, in the context of the primacy of teaching and learning, price becomes only a single data point in the overall determination of value. The lowest cost may not represent the best overall value. Typically, vendor-sourced LMS pricing models fall into one of two categories: a prix fixe approach, where all features and functions are bundled into a single package price, and an à la carte approach, where an institution chooses from among a menu of options, each with its own price. Likewise, the unit metric used for calculating total costs may vary between potential partners (e.g., calculation based on FTE versus active users). Comparing the total costs of various solutions can therefore be a challenge, and an institution may need to draft a comparison table with necessary conversions to get an accurate picture of each option’s total proposed price.

For open-source solutions, total cost of ownership needs to be determined to include hardware, software, infrastructure, and human resources to operate and maintain the system. In all cases, you must consider future institutional needs and cannot neglect factors such as support, training, maintenance, license fee escalation, and contract term.

Whether you use an RFP process or pursue a sole-source purchase will be determined by your own institutional policies and your public/private status. Regardless, be sure to explore possible price reductions resulting from aggregated demand such as statewide consortium pricing agreements or Internet2 NET+ agreements.

**Accessibility**

Supporting all students at an institution is not only required by law—it is the right thing to do. The platform partner should be able to articulate specifically how the system supports accessibility requirements for students who need accommodations under the Americans with Disabilities Act. The most common accommodations typically relate to learning disabilities. How easy is it for faculty to moderate tests to allow selected students more time to complete them?

Is the system certified by the American Foundation for the Blind? How will various screen readers interpret the system for a user with a visual impairment? Don’t simply take the platform’s word for it—verify how the system will work for disabled students by testing it directly, preferably with the intended population. Throughout the process, try to discern whether accessibility is a core part of the platform ethos or simply a requirement checkbox akin to the ability to randomize questions in a test. Ideally, accessibility support will be an overarching philosophy in the platform’s design and architecture.

**Determining Priorities**

Ultimately, each institution will need to decide the relative importance of the LMS selection criteria. One effective method to do this is to survey the faculty on their tool usage and preferences. That can help to
highlight areas they feel are most important. Likewise, students and other stakeholders can be surveyed to glean their opinions. Faculty might not feel that automatic forwarding of course notifications to text messages is particularly important, whereas students might rate that feature very highly.

If your institution already has an LMS deployed, collect data on the volume and types of technical support calls you receive related to the LMS. This can help you evaluate the most troublesome aspects of the current platform compared to the same features in a potentially new platform.

Ranking discrete administrative, technical, security, teaching and learning, and other system features on a priority scale will help articulate both internally and externally the criticality of some considerations over others. Obviously, everything can’t be a Priority 1, so some internal discussions will need to take place before engaging a new potential LMS so that the institution is consistent in its external communications. If you are using an RFP process for selection and procurement, this priority list can be included.

Although it is worthwhile to ask potential LMS providers to complete comprehensive questionnaires detailing how the system addresses each of the discrete system features and attributes, make sure that your expectations are realistic. Frankly, most systems can be described in a way that meets or exceeds all identified requirements, regardless of priority. The exercise is worthwhile as a mechanism to better understand each product and how it is positioned; however, it is not particularly useful as a means to differentiate one platform from another. When all potential partners imply that they can do almost everything, your selection must be based on more concrete data points, such as those described earlier.

Key Questions to Ask

- What features are most valuable and useful in your current system?
- What additional or different features would you like to see in your new system?
- What trends do you think will be most important in your institutional environment (e.g., social media, streaming video, mobile, competency-based learning, badges, prior learning assessment, etc.)?
- Is the system extensible through API and LTI integrations?
- What is the pricing schema, and what will be the total cost of ownership over the life of the contract?
- For open-source options, do you have the internal infrastructure and human resources to manage your own system?
- How, specifically, is the system accessible for accommodating students with disabilities?
- How do you think your needs—both faculty and students—will be different in five years?

Where to Learn More

- Sagitec. [LMS Evaluation Tool](#).
- University of Central Florida. [LMS Evaluation Checklist](#).
- University of Central Florida. [LMS Migration Website](#).
- University of Toronto. [LMS Evaluation Checklist](#).

**About the Author**

Thomas B. Cavanagh ([cavanagh@ucf.edu](mailto:cavanagh@ucf.edu)) is Associate Vice President of Distributed Learning at the University of Central Florida.

**Citation for This Work**


**Notes**

5. Ibid.