June 2011

eSN Special Report

eSchool News • 17



Learning Management Systems

With online learning on the rise, more K-12 schools are adopting LMS software

Online and blended learning have taken off in the last few years—and that has spurred more interest in learning management system (LMS) software among K-12 schools.

An LMS is a software program that allows for the administration, delivery, and tracking of classroom or online events and eLearning programs. A robust LMS facilitates the planning and organization of online learning events, as well as the centralization and delivery of content, discussions boards, and other online resources. It lets teachers communicate with parents, assign and collect projects online, host discussions, and track a student's progress.

As more K-12 schools experiment with online instruction, many are discovering they need an LMS to manage these various efforts. But, just as online and blended learning can take many forms within a school system, the market for software platforms that can help with online learning is quite diverse as well.

In this Special Report, we'll take a closer look at what an LMS is, what it should be able to do, and how to choose a system that best meets your needs.

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LMS vs. CMS software

An LMS differs from a more basic content management system (CMS), although both can play a role in online instruction.

While a CMS allows users to upload content and gives a website a consistent look and feel across all pages, an LMS is where you "actually house the courses," says Bradley Mitchell, LMS administrator for the South Carolina Department of Education.

Unlike an LMS, a typical CMS doesn't allow for interactive features such as discussion boards or online tests and quizzes, Mitchell explains.

Other programs that include some of the interactive features of an LMS—such as the ability to communicate and collaborate in an online environment—do exist. Some of these tools are offered by publishers to go along with their online textbooks, but these often end up like silos within a school, with one teacher using one product and another teacher using something else.

Other online platforms, such as Edmodo or Sophia, are free "social learning" environments for sharing information, while still other products—like Edline and eChalk—offer tools that let educators create course websites and communicate with parents and students.

Although these systems might be a good fit for schools with more modest requirements, some of these online services are little more than file exchange systems, says Jamie Woodard, technology administrator for the Virtual School in Clark County, Nevada.

"A learning management system is structured; you don't just make label changes where you have things called 'classes' or 'assignments," Woodard says. "You can assign values, grades—everything is built around the idea that it's a class, there's a certain amount of content, and the students will have to show the ability to know that stuff."

The LMS is "basically our building," Woodard goes on. "As a school that is accessed entirely online, when you click on a class, it's like walking into a classroom. Each teacher has a central area which is like their classroom, where they have all their assignments, all their content."

The need for an LMS is not limited to online-only classes, however. LMS software also can be used to supplement traditional instruction, where the course work that happens within a brick-and-mortar classroom is managed within an LMS that helps educators keep track of student achievement, communicate with parents, and so on.

Teacher development is another activity that can take place within an LMS: The training and content can be offered online, which then can be tracked to see, for example, which activities have been completed by which teachers, how teachers are performing, and what areas need more focus.

"This way, you don't have to have everyone taking the day off, closing down the school to give teacher training. You can do it all online," says Phill Miller, vice president of product strategy for Moodlerooms, a company that provides a learning management platform based on the opensource Moodle LMS.

The LMS market is undergoing a stark transformation, Miller says. While the postsecondary market has reached near-total saturation, with 95 percent of postsecondary institutions using an LMS, the K-12 space has been slower to adopt LMS solutions. But that's changing, Miller says, as schools increasingly offer online classes for remediation, as an alternative to summer school, or to give students the opportunity to take advanced classes they otherwise would be unable to provide.

Learning management systems are becoming increasingly important for K-12 schools.

Until now, many schools that offered online or blended learning (a combination of online and face-to-face instruction) offered those options through packages from companies such as K12 or Connections Academy, which host and manage everything themselves—so the school does not have to handle those pieces. Now, however, more and more schools are beginning to choose online classes from different providers, and they want a single online platform to help them manage all these offerings. As a result, Miller says, many institutions are recognizing the need for a full-fledged LMS.

Proprietary vs. open source

Along with a rise in the use of LMS software among K-12 schools has come another seismic shift: School leaders increasingly are mulling the use of free, open-source LMS solutions such as Moodle and Sakai, which can offer the same types of features that can be found in proprietary software.

Some say an open-source solution is the right choice because it is more easily customizable, says Karen Billings, vice president of education for the Software and Information Industry Association.

But one of the major differences between open-source and proprietary software is that open-source software doesn't come with a team to manage the solution, so schools must either host and support the LMS themselves or contract with a company to do this for them. Hosting and supporting the software themselves "requires some technology skills and time and resources from district staff, so the trade-off is total cost of ownership," something schools need to look at closely, Billings says.

Besides the customization aspect, another factor that helped drive interest in open-source alternatives was the protracted court battle between Blackboard Inc., the leading maker of proprietary LMS software, and Desire2Learn, one of its chief rivals, over what many observers considered to be an overly broad software patent held by Blackboard.

The patent eventually was ruled invalid, and the two companies settled their lawsuits in late 2009—but not before many school leaders began seeking non-proprietary LMS options amid all the ruckus.

For its part, Blackboard argues that it's important to have technology partners that can grow to meet a school's needs.

School leaders should look for an LMS partner with "the ability and the budget to innovate around new technology," says Blackboard Senior Vice President Brett Frazier. "You don't want to buy a solution that's right just for today, because tomorrow, the likelihood is that it won't meet your needs, or it will meet your needs for one thing but you'll end up with five different things for different needs, and you'll be stuck with trying to manage them separately. That's a trend we keep hearing."

A robust tool like Blackboard allows schools to jumpstart their use of technology, says the company's Frazier, who added that Blackboard also offers a free solution, called CourseSites, designed to help schools quickly get started using an LMS.

This free version of the Blackboard LMS is useful for schools that might offer just a handful of online classes, he says, or for schools that might have just a few teachers who want to begin using an LMS.

CourseSites is different from an open-source solution in that it will always be updated to the latest version automatically, so users do not have to worry about upgrades. Additionally, it's fully hosted in the cloud, Frazier says, so it doesn't need to be hosted and managed on-site by districts, and it includes access to an around-the-clock help desk.

The difference between no-cost LMS programs like CourseSites—as well as other free services that include LMS-like features, such as Edmodo and Sophia—and an open-source LMS like Moodle is that "open source is certain to be around; free is not," says Raymond Schroeder, director of the University of Illinois at Springfield's Center for Online Learning, Research, and Services.

CourseSites, Sophia, and other such services "can provide a free, good-quality LMS; however, I am always concerned about staying power," Schroeder explains. "Will they be there in a year or two? Will they become feebased, such as Ning did a year ago? A school system might be better advised to [choose] open-source software such as Moodle. In that case, you have your own version that will not disappear and will never ... become fee-based."

LMS success stories

The South Carolina Department of Education had been using a popular proprietary LMS with some success, but the price kept "going up and up," says Mitchell. He felt that open-source software might be the way to go, but hosting the software himself sounded like a struggle he was not willing to engage in.

"We didn't have someone on our staff who really understood Moodle," Mitchell says.

After much research, Mitchell reached what he felt was the perfect compromise: The department would use Moodle but would contract with Moodlerooms to host and manage the program. Mitchell says he estimated the cost of hosting Moodle in-house and having Moodlerooms host it was about the same, once his IT team factored in the staff time and resources it would have taken to do it themselves.

Moodlerooms wraps enterprise-level services and extended features around the open-source Moodle core, giving flexibility to institutions, the company says. In addition to price, that flexibility was a key factor in choosing Moodlerooms, says Mitchell.

With its old proprietary solution, Mitchell was not able to modify the LMS to meet the needs of the department's virtual-school program. If the virtual school needed additional features, "there was either an additional cost or they'd say there wasn't enough need for that at the time, so it wasn't possible," Mitchell says.

With Moodle, "We had teachers coming to us and saying, 'We really want to be able to do this,' and we could add it," he explains.

For example, his teachers wanted to be able to merge Moodle with the virtual school's registration program, so students could register in one system and then be transported to Moodle. "We needed a way to be able to do that automatically, so Moodlerooms developed that with us right away," says Mitchell.

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Another request from virtual-school teachers was the ability to post "outcomes" rather than just a letter grade or number grade; teachers also wanted to be able to post whether a student met a learning objective or not. Moodle alone did not allow for that, but there was an application that could be installed so teachers could enter objectives into the program.

"Now [teachers] can go in and say, 'Based on the fact that [students] passed the test, and read everything in the chapter, I can say they met the standard.' This helps them to track whether students are meeting standards for the state," Mitchell says.

Cost was a huge consideration in choosing Moodle and Moodlerooms. Because of budget cuts, Mitchell had to get rid of the existing LMS and find something more affordable. But switching from one LMS to another is never an easy decision.

"There's always going to be transition costs," says Moodlerooms' Miller. "When you've invested a lot of time and energy in building content, processes, training, and procedures, all these things might have to be revisited if you switch from one thing to another."

That is actually a benefit of using Moodlerooms, Miller adds: If at some point Moodlerooms doesn't meet a district's needs, the district can go back to using Moodle by itself and still have all the things it needs. "That's a great exit strategy for a lot of schools," he says.

The Houston Public Schools in Minnesota also uses Moodle and Moodlerooms.

"We use Moodle for our district infrastructure," says Tara Thompson, former technology training and development coordinator for the district's Creative Visions Teaching Academy. "For a small, rural community, it was kind of unusual to start an online school. One of the things we wanted to do was help build support. So we have a community education program that has offered classes using Moodle. We also use it for staff support [and] training. There were a lot of needs hanging out there in our district, and the LMS could address all of those."

Like the South Carolina Department of Education, cost was a huge factor for Houston Public Schools, which is part of the reason they chose Moodle and Moodlerooms.

Thompson used Moodle in a pilot program by creating the Creative Visions Teaching Academy, a professional development center. She developed graduate-level curriculum courses, and one of the courses was teaching educators how to use Moodle. After the pilot, Thompson realized they were not prepared to grow with Moodle in-house because of the time it would take for the IT staff to support it.

"We were researching different plug-ins, math notation tools that would allow us to have all the special math characters. There are tons out there, so knowing which would give us the most flexibility—we didn't have the resources to invest time in that," says Thompson. "So we looked for a provider that had the ability to look at the different tools for Moodle and would be able to pull them into the Moodle package for us. That's one of the things Moodlerooms has done for us."

She adds, "I know it will be stable, secure, and updated when updates are available. We're not six updates behind, we're getting them as they come. We couldn't do that in-house."

While an open-source solution comes at the right price and with the right flexibility for many school districts, others prefer the security and large budget behind a major proprietary LMS brand.

The Virtual School in Nevada's Clark County School

District uses Blackboard for its delivery of online courses to students. "Students can be at home, they can be doing sports activities across the nation. Students can go anywhere, and as long as they can log in and remember one username and password, they can access all their classes. Everything we do to teach our students is through Blackboard," says Woodard.

Brisbane Grammar School in Australia also found itself in need of an LMS. The school had a functioning website and an intranet to facilitate teaching and learning, but officials found they needed to provide a more consistent experience to users. There was a great deal of difference between the various department web pages, which led to inconsistency and confusion across the school. Additionally, faculty struggled with electronic submissions of assignments.

School leaders chose Desire2Learn's LMS as the answer for their total online presence. Since adopting the software in 2006, they have found that staff members communicate more effectively with parents, and the program facilitates more information sharing, stronger partnerships, and an enhanced sense of community.

That has been a familiar experience for many LMS users in K-12 education. As more schools discover a need for LMS software, some observers believe learning management systems inevitably will become the center of the learning process.

"I believe that the LMS could become the central 'hub' for learning, but in the end it is really about students, teachers, and parents," Miller said. "The LMS will only become the central hub for learning if it empowers teachers to engage their students more effectively, parents to become more involved in learning, and students to explore learning more effectively."

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Tips on choosing and implementing an LMS

Adding a learning management system to a school's existing ed-tech inventory involves many difficult decisions.

When choosing an LMS, make sure you choose the five or 10 things that are the most important to you and focus on those, rather than coming up with an extensive list with hundreds of requirements, suggests Phill Miller, vice president of product strategy for Moodlerooms.

"Once you focus on those things that are really important to you, then ask, 'Is it easy to use, easy to train my faculty?" Miller says.

Another key aspect to consider when implementing an LMS is to have a "champion" at the school or district who can take ownership of the project. This is different from a project manager who would manage the implementation. Rather, a champion would be someone who "holds the banner up, who says we want to get our courses online, we want to better communicate with parents. The champion helps the project be successful, because it gives the project a purpose and helps move things forward," Miller explains. "That is critical to success."

Tara Thompson, former technology training and development coordinator for the Creative Visions Teaching Academy at Minnesota's Houston Public Schools, agreed that having a champion is a key to a successful implementation.

"I would suggest getting early stakeholder buyin," she says. "[We had] a leadership team that said, 'Yes, we need to do this,' and we just started telling people, 'This is coming, this is how it's going to work.' It could have been a much better implementation if we got teachers, students, and community members involved and understanding why we needed an LMS."

Thompson added that having such buy-in wouldn't have changed what software they chose, "but there would have been less questioning, less pushback, and we would have gotten further, faster," she says.

Thompson also suggests that when schools train teachers on using the LMS, they combine the training with the implementation process, so that as a teacher learns how to create a course online, he or she is actually creating the course to be taught.

"A lot of times we see a trainer come in, train the staff, and leave, and what [the teachers] created in training is just busy work," Thompson explains. "So we created a graduate-level course, and it taught teachers how to use Moodle in their class, combining the pedagogy with the technology. They had to create discussion boards, post their content—all the [online aspects] that they were actually using in class—so by the time they were finished with the course, they were ready to begin teaching with it. That really moved the implementation along."

When considering an LMS, think about the long term, says Sara Weston, curriculum director of the Open High School, a public charter school in Utah.

"What I found was, all the add-ons and bells and whistles that were being developed, they were being developed for the big guys like Blackboard and Moodle," she says. "I didn't want to hitch our star to a small company. You need to be able to respond quickly."

Weston said the Open High School went with a proprietary model for a year, then switched to Moodle. She suggests that schools considering Moodle not be put off by the "blah-ness" of Moodle's visual aspect.

"I was so turned off by Moodle, visually. But if I had known from the beginning all the 'skinning' you

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can do, I would have seen the features and not the visuals," she says. "What things look like really matter. If I had given my students the bare-bones, regular Moodle, they would have been really turned off."

Weston also researched Sakai, but her impression was that it was geared more toward postsecondary education. "Moodle seemed more accessible to the K-12 market," she says.

Be aware that, in the end, the system is not going to be used exactly as you envision it, says Dan Wray, executive director with Clark County, Nev., School District's technology division.

"Teachers and students will find uses that you didn't envision," says Wray. "And the ones that you were sure they would use, they'll look at you and say, "Why?""



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