

What will a Learning Management System do for me?

A Learning Management System (LMS) provides the platform for the enterprise's online learning environment by enabling the management, delivery and tracking of blended learning (i.e. online and traditional classroom) for employees, stakeholders and customers. A robust LMS should integrate with other departments, such as Human Resources, Finance and e-commerce, so administrative and supervisory tasks can be streamlined and automated and the overall cost and impact of education can be tracked and quantified.

Furthermore, an LMS should support a collaborative learning community, offering multiple modes of learning—from self-paced coursework (Web-based seminars and classes, downloadable, CD-ROM and video content) to scheduled classes (live instruction in classroom settings or online) to group learning (online forums and chats). In its ability to integrate, organise and standardise learning across broad organisational requirements, the LMS model has been compared favourably to enterprise resource planning (ERP) solutions, which convert a company's back-office into a seamlessly functioning whole.

Recognising how integral education is to the operation and success of any organisation, it is not surprising that e-learning is now on a parallel track with other large-scale enterprise implementations, such as ERP, customer relationship management (CRM) and supply chain management (SCM). As organisations transform into e-businesses, they move from a fragmented information culture populated with disparate legacy systems to what is known as a "contextual collaborative" culture—a real-time, knowledge-sharing system to coordinate business activities across the enterprise and extended supply chain (via enterprise portals, applications or EDI, electronic data interchange).

This worldwide trend is reshaping the e-learning market as well. Instead of implementing and supporting a hodgepodge of stand-alone projects, companies are looking to extend the value of their e-learning resources to support their diverse education needs across business functions.

There is a host of factors driving the implementation of LMS solutions. In today's knowledge economy, companies must be able to distribute, manage and assess educational programs across practices and geographies in an efficient, fast and low-cost manner. And, as any corporate learning officer knows, corporate learning and training responsibilities do not abruptly end at the corporate firewalls. Ongoing educational services also must be provided to a host of external audiences: the developer community, partners, customers, resellers and suppliers.

Globally, organisations are faced with skilled labour shortages and limited resources. In response, multinational companies are seeking ways to enforce consistent learning standards and skill training across their operations. Realistically, this can only be accomplished through a Web-based system providing 24x7 flexi-time learning in multiple languages.

Another key driver in this all-inclusive approach to education is corporate accountability. With increased scrutiny from stakeholders, regulatory agencies and the media, public companies and financial services providers must be able to demonstrate that their senior management, sales force and financial consultants are fully versed in compliance laws and business ethics. Moreover, for companies with overseas offices, this training must drill down to regional and local statutes and ordinances.

Evaluating a Learning Management System

When you begin to evaluate learning management systems, you are going to hear a lot of terms that end in "-ity": high availability, usability, scalability, interoperability, stability and

security. Let's quickly examine each of these issues and why they are critical to the function of any enterprise management system.

- High availability: The LMS must be robust enough to serve the diverse needs of thousands of learners, administrators, content builders and instructors simultaneously.
- Scalability: The infrastructure should be able to expand—or “scale”—to meet future growth, both in terms of the volume of instruction and the size of the student body.
- Usability: To support a host of automated and personalised services, such as self-paced and role-specific learning, the access, delivery and presentation of material must be easy-to-use and highly intuitive—like surfing on the Web or shopping on Amazon.com
- Interoperability: To support content from different sources and multiple vendors' hardware/software solutions, the LMS should be based on open industry standards for Web deployments (XML, SOAP or AQ) and support the major learning standards (AICC, SCORM, IMS and IEEE).
- Stability: The LMS infrastructure can reliably and effectively manage a large enterprise implementation running 24x7.
- Security: As with any outward-facing collaborative solution, the LMS can selectively limit and control access to online content, resources and back-end functions, both internally and externally, for its diverse user community.

Optimally, an LMS will consolidate mixed-media training initiatives, automate the selection and administration of courses, assemble and deliver learning content, measure learning effectiveness and integrate with other enterprise applications.

There are features and capabilities that become increasingly important as e-learning usage grows. From an operational point of view, the LMS and its key components—content management, user administration and system administration—should be 100 percent Web-deployable, requiring no additional client applications. As with any enterprise application, the more the software is customised, the harder it is to maintain, upgrade and expand.

In the past, a lot of companies over-engineered their e-learning solutions, spending a lot of money on consulting and customising their applications. Because the pedagogical and business models for online learning were still in their infancy (and evolving rapidly) and the educational goals and targets changed, the organisations were stuck with “hard-wired” solutions with limited flexibility and scale.

This leads to a second important consideration. Choose an LMS built on an open architecture that supports the emerging learning standards, which go by the acronyms IMS, AICC and SCORM.

The IEEE is the overall standards accreditation body that is responsible for learning object metadata standards. These include a set of standards based on specifications called SCORM (sharable content object reference model), which are influenced by industry groups such as IMS and AICC. In simple terms, these industry-standard groups are creating technical specifications to enable and support a unified, standardised content model for Web-based learning. When you are assembling content from multiple sources and different networks, the biggest underlying task is to get the software and tools to “talk” to each other (i.e., import and export data and respond to the same operational commands).

The LMS should integrate with your enterprise e-business applications. To automate learning services and resources and support self-service learning and administration, many departments must get involved. For example, in-house sales-force training data is often related to information such as competency models held in human resources and perhaps even legal departments (on compliance issues or mandatory testing).

Information regarding courses taken by customers may feed directly into a CRM system. The scheduling and use of physical space (classrooms and auditoriums) and other hard assets (A/V equipment, a videoconferencing system) should be linked to a resource management application. Furthermore, it is not unusual for companies to charge customers, partners and other outside parties for courses. In those instances, the LMS should act as a fulfilment engine to manage online orders, which requires integration with the company's financial and e-commerce systems.

As online learning enables the use of education in many stages of the customer and employee relationship cycle, these integration requirements will continue to grow. The key is to avoid creating "islands" of data, or worse, duplicate data, across the enterprise.

In terms of performance, the more advanced LMS solutions offer the ability to prescribe and personalise individual learning paths, as well as reformat, reuse and syndicate content. Many LMS systems establish predefined roles that prove inflexible and porous; that is, they provide almost universal access to the content and learning events. Obviously, this can have a negative impact on the effectiveness and security of the system, since courses offered to employees might contain proprietary or sensitive information not intended for outside consumption.

An LMS built around "fine-grained permission" allows for the role-specific definition of what each individual learner can do or see—"just enough" training. This flexible permission model enables multiple levels of access, learning modes and self-service tools for a range of system users (learners, content developers, instructors and site administrators) without compromising security.

An assessment engine with built-in testing and evaluation capabilities is critical to monitoring, tracking and rating e-learning initiatives. The system should support time limits for self-administered tests, limit the number of attempts allowed and impose a time delay between attempts. By tracking the learning process, learning officers and management can evaluate the effectiveness of the courses and accurately gauge the knowledge and skill levels of their workforce.

For example, a sales readiness group can track whether salespeople are prepared to represent a new product or service in the field. The fact that a geographically dispersed sales force now can be trained "en masse" results in faster time-to-market and consistent messaging throughout the sales organisation. Assessment also is key for corporate compliance. As previously mentioned, it provides verifiable proof that employees have been schooled in the laws and regulations governing their business practices.

Licensing and Purchasing Options

Learning management systems also are compared to an ERP system in terms of complexity and cost of implementation. As with any large enterprise application, the installation requires IT expertise and ongoing support. While Fortune 500 companies might opt to purchase, plan and implement an enterprise online learning system, many companies are moving toward the ASP model.

With this outsourcing model, a third party, often the LMS vendor, manages the IT infrastructure, either at the customer site or remotely. While outsourcing eliminates the need for IT staff and maintenance, keep in mind that the LMS must be designed for this kind of deployment.

Basically, there are four licensing models now available in the e-learning market:

1. The software is purchased and installed and managed in-house.
2. The company buys the software, but it is housed and managed remotely by a third party. Administrators, content builders, instructors and learners access the system over the Internet.
3. The company buys the software and installs it on its own data platform, but the maintenance and upgrades are managed by the LMS vendor or another third party (e.g., a system integrator).
4. For the cost-conscious, there is yet a fourth option. Some LMS vendors operating their own enterprise e-learning system offer to share access to their system. Basically, you lease "space" on the host data site.

In determining which model is right for your company, you must get the IT professionals involved to help map the company's technical capabilities and needs. There is no one-size-fits-all LMS solution, and vendors should offer choices.

Ultimately, it is the company's decision whether or not to have the enabling infrastructure hosted or installed. Equally important, once you make that choice, you should still have the flexibility to make it again. As your e-learning needs change and grow, you don't want to be locked into what originally fitted. If you installed an LMS, it should be flexible, extensible and based on open standards. You don't want to lose functionality, archival information and coursework from earlier learning initiatives. The LMS should be able to scale and support new and emerging learning modes, technologies and tools.

Getting Started

The general consensus among analysts tracking the e-learning market is that company success is tied to real business objectives. An LMS implementation should be approached with the discipline, hard goals, timeline and performance benchmarks of any asset management project. Don't get confused by a laundry list of features; figure out what you want to accomplish from a business and an educational point of view and then get technical advice on what functionality you'll need.

In evaluating an LMS, you should also take a hard look at the vendor. Whether outsourcing or purchasing a solution, you want a software partner with the financial resources and global market reach to support your evolving needs. Also, seek a partner that knows and understands the educational space (by serving on industry standard organisations or having education specialists guide product development).

In addition to soliciting advice from technical specialists, I recommend you ask prospective vendors for customer references. System users can tell you both the strengths and shortcomings of the technology, as well as what they would do differently if starting from scratch. You also should talk to peers who have implemented learning management systems to learn about their expectations and goals and whether they've been met.

One way to test the system is to work with a vendor on a pilot program. You should be able to start at a size that is comfortable to you, with minimal commitment of finances or staff. You might consider leasing space on a vendor's e-learning system. This way, you can test a fully operational and market-proven system on a low-cost trial basis.

Conclusion

In summary, a learning management system optimally should:

- Consolidate training initiatives on a scalable, low-cost Web-based platform,
- Assemble and deliver learning content rapidly in multiple languages.
- Measure the effectiveness of training initiatives.
- Mix classroom and online learning.

- Integrate with other enterprise application solutions.
- Centralise and automate administration.
- Use self-service and self-guided services as much as possible.
- Support portability and standards: AICC, IMS and SCORM.
- Personalise content and enable knowledge re-use.