

Learning Technology Convergence: For One Healthcare Institution, it is all about the SERVICE; the Integrated Learning Management Service

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Enterprise training has significantly evolved during the past decade, culminating with the most contemporary advancements in Web-based eLearning. The era of the Learning Management System (LMS), which primarily focused on administration of classroom-based training, gave way to the dawn of eLearning and its assortment of PC-based, standalone authoring tools, which were followed by the Web-based, collaborative authoring and delivery environment called the Learning Content Management System (LCMS). However, many organizations continue to seek a bridge between the powerful administration functionality of the LMS and the ease-of-use and cost efficiency of the Web-based LCMS.

The quest for a practical balance between classroom-based training, web-based training, synchronous web conferences, and asynchronous self-study has never been more apparent and is creating a need for the next generation of learning management technology to support this combined, 'blended learning' approach. Specifically, this technology must include an 'integrated' web native eLearning authoring component and be delivered, on demand, as an online 'service' instead of a client installed software solution. The combination of these two components, with the existing features of traditional learning management technology, creates an Integrated Learning Management Service and a new approach in developing, delivering and managing enterprise wide learning. Before addressing the key benefits of this new class of learning management technology, it is important to understand the contributions and limitations of the earlier solution sets.

eLearning Solutions: A Historical Perspective

The LMS (Learning Management System) was originally designed to coordinate and manage instructor-led, classroom-based training, which included tracking registration, attendance, class lists,

grades, test results, and other administrative requirements. It is traditionally sold as a client-licensed software "system" that requires a lengthy implementation period, that must be installed on internal servers, and must be maintained by the in-house information technology (IT) department. The expense, complexity, and resource commitment required to support an LMS is significant and detracts from its benefits. In addition, since the LMS was not natively designed to handle eLearning, compatibility issues between on-line content and the LMS often arise. For example, off-the-shelf, Web-based courseware must often be modified to interoperate with a given LMS, and a separate course-authoring tool is needed if course developers wish to create their own online courses themselves rather than purchase off-the-shelf courseware. Many of these eLearning authoring tools are difficult to use and require a substantial investment in user training, which is an obstacle to successful migration of instructor-led training to effective eLearning.

The alternative to the LMS is the LCMS (Learning Content Management System). The origin of this solution resides with the need for rapid eLearning development through the creation of RLOs (Reusable Learning Objects). While the LCMS is typically Web-based and designed to allow users to author on-line courses, tests, and perhaps surveys, it also enables the delivery and management of on-line content; that is, the LCMS possesses LMS functionality, but only for eLearning. Designed from the ground up as a collaborative, multi-user environment, the LCMS enables non-programmers to easily create, share, store, reuse, manage, and deliver learning content as an on-line corporate university. Rapid development and ease-of-use are driving companies to the LCMS solution to address their eLearning needs. While the LCMS addresses how to develop, deploy, and manage eLearning, it does not provide a solution for the management of instructor-led training or blended learning.

The Next Generation: Holy Cross Hospital and the Integrated Learning Management Service (iLMS)

Now, a new paradigm is emerging as the evolutionary successor to the LMS and LCMS, combining the best features of both while taking advantage of the 'software-as-a service' delivery model of the Application Service Provider (ASP). To be a true service however, the iLMS must be a native ASP, n-tier scalable, and not traditional software licenses hosted in a server farm. In this service engineered architecture, the iLMS combines the power of a database management system, the global reach of the Internet and the ease of use of a web browser to remove the technical, cost, and complexity-barriers that inhibit organizations from utilizing the Internet as a training vehicle.

For Holy Cross Hospital, a full-service, non-profit, Catholic hospital in Broward County Florida, a strategic blended-learning training initiative proved to be just what the doctor ordered. But how to enable such a solution, without capital expenditure, on a limited budget, with no IT support, while simultaneously providing required training to all personnel, created an interesting challenge. Holy Cross found the Integrated Learning Management Service, iLMS, to be a perfect solution. Leveraging the on-demand capabilities of an iLMS in concert with its existing wireless computers-on-wheels (COWs), Holy Cross Hospital was able to immediately begin training more than 2,800 hospital employees across its 75 departments.

By utilizing an iLMS, organizations like Holy Cross can now collaboratively author eLearning courses, tests and surveys, and seamlessly deliver and manage all their learning content – be it online, off-line, synchronous, asynchronous, or blended modes. As an integrated solution, the iLMS overcomes content to LMS compatibility issues of the legacy model. As an online service, the iLMS removes costly and complex implementation requirements inherent to legacy LMS deployments, making it the best choice for any learning management need.

Integration Advantages

With the increasing adoption of eLearning, particularly for custom-developed compliance and sales support courses and assessments, organizations cannot afford to be hindered by content that will not launch or communicate with their LMS tracking and reporting functions. What makes the iLMS "integrated" is that it has eLearning authoring and learner record management built into it.

Mandated by the Joint Commissions on Accreditation of Healthcare Organizations (JCHAO), Holy Cross Hospital had an immediate need for regula-

tory compliance training of all medical staff. Through the use of their iLMS, Holy Cross Hospital was able to manage all facets of both online and classroom-based instruction. They were quickly able to develop, distribute, and manage online courses without any support from their IT group. On-demand use of an iLMS allowed them to quickly, easily, and affordably meet the requirements set forth by JCHAO.

As demonstrated by Holy Cross Hospital, an iLMS is designed to instantly launch eLearning courses and automatically record learner status for on-demand reporting from built-in report generators in order to track learner progress and ensure training has been completed. This is made possible by the underlying iLMS database that coordinates learning content development and delivery with learner record capture and reporting (all invisibly and seamlessly over the Web). In the case of Holy Cross, hospital educators designed their eLearning courses with patient safety training in mind, developing all online training modules in short fifteen minute segments to reduce the impact on staff time and to eliminate any disruption of patient care. For instance, if nurses have to leave the training for any reason, they can easily bookmark their place and return at their convenience.

While some LCMS products offer integration of eLearning authoring and learner record management, they are limited to only eLearning applications. However, the iLMS provides organizations with the added ability to schedule and manage classroom-based instruction, off-line self-study content such as videotape-based training, and online synchronous training events such as web conferencing. Learners can now register for courses themselves and instructors can manage their classes online. The iLMS provides inherent accountability through learning paths that ensure each learner secures the training that is uniquely appropriate for them. The Holy Cross Hospital staff, for instance, was able to certify compliance at a course level while monitoring the progress of an individual learner, or groups of learners, through their planned curriculum, or learning path.

Service Advantages

Because the iLMS is a service, not a system, there is no software to install, maintain, or upgrade and no servers to buy, operate, or support. In fact, there are no server-side information technology resources required at all. A recent publication (LMS Lowdown, 2004) suggested that the average cost and time associated with the implementation of a traditional LMS was \$500k and three years. The elimination of these significant costs combined with the on-demand use of the iLMS provides a real-time solution for enterprise management of all "blended learning." Companies now have a single,

integrated platform that will allow them to achieve “learning equilibrium,” which is the optimum delivery blend of all learning media at a specific cost. This learning equilibrium will be unique to each company and will dynamically change over time, based upon the effectiveness of the training delivered and measured by the iLMS.

The online service aspect of the iLMS allowed Holy Cross Hospital to immediately deploy a blended learning solution hospital wide, without any capital expense or IT resources. These two issues were very big obstacles in other solutions that the hospital investigated. In conjunction with their COWs, Holy Cross Hospital trained whole departments, such as the Operating Room Suite, Emergency Room, Critical Care, Labor & Delivery, and MedSurg on compliance regulations such as HIPAA. In addition, they developed and delivered enhanced professional training in the areas of Advanced Cardiac Life Support, CPR, Domestic Violence, and Fetal Heart Monitoring.

The iLMS has eliminated the capital costs and corporate resources required in deploying learning management technology. This now enables mid-market companies to take advantage of all of the benefits noted above without the issues of purchasing, implementing, and maintaining a legacy LMS.

Productivity Advantage

Ultimately, the most important advantage of an iLMS is the increase in productivity it provides to an organization’s training operations. It is a competitive necessity for all organizations to continually improve their processes, and some of the biggest improvements have come through the application of modern information technology. For training organizations, that means improving the capture, organization, and transfer of knowledge followed by an assessment of the desired outcomes and documentation of the training process. The iLMS impacts the complete training lifecycle, sup-

porting all of the constituents in the process – learners, trainers, and managers. As an online service, the iLMS provides a collaborative development environment where trainers can take advantage of reusable learning objects that can be shared with other authors to reduce development time and ensure consistency among lessons. Once a course is published, information can then be queried and reports generated allowing trainers to measure the effectiveness of their training, which validates a real return on their investment. For Holy Cross, the ROI for leveraging an iLMS has been immediate and as a result, this year 85% of the hospital’s entire training will be deployed using their iLMS.

Thanks in part to the on demand availability and the integrated eLearning authoring capabilities found within an iLMS, corporate trainers can now, for the first time, subscribe to an online service that allows them to choreograph all of their learning resources, develop custom online courses/tests/surveys, and measure the effectiveness of knowledge transfer without the need for any IT resources or capital expense. With studies showing that training time can be reduced by up to 50% through the development and deployment of online courses (ASTD, 2004), the iLMS becomes an enabler of online and blended learning to a market that previously could not afford such technology, rendering benefits to employees, customers, and shareholders alike.

References

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