LCMS, LMS—They're not just acronyms but powerful systems for learning.

By Kevin Oakes

When I first heard the term LCMS used widely, I cringed. Great. Another confusing e-learning acronym we have to explain—just like LMS, RLO, AICC, LRN, IMS, and SCORM, among others. When will we learn?

Despite the silly acronym, LCMS is the freshest concept to hit e-learning since LMS burst onto the scene a few years ago. Let me explain why.

It's the content

LCMS is all about the content and providing that content to the user more efficiently and more dynamically. LCMS stands for learning content management system, which is defined by IDC as a system that's "used to create, store, assemble, and deliver personalized e-learning content in the form of learning objects." Also

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Clear as mud, right? Before analyzing LCMSs in more detail, let me first clarify some of the terms used in IDC's definition—such as *personalized*, *e-learning content*, and *learning object*.

Personalized. You'd call a piece of content personalized if it offers exactly what a specific user needs. Catering to the individual learning needs of a user is important to making the learning useful. A user's pre-

cise needs are often determined from his or her background, current level of knowledge in the subject matter, job functions or role, and personal preferences.

E-learning content. This term refers to content delivered electronically, almost always through the Web but sometimes via other means such as CD-ROMs.

Learning object. Basically, it's a self-contained, small chunk of learning that accomplishes a specific learning objective. A learning object is also self-describing. In other words, in addition to the content, it contains a description of itself that includes such information as the nature of the content, learning objectives, author, language, and version. Information that describes the object is typically referred to as metadata.

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Look at Properties in any Word document, and you'll get a feel for what metadata represents. In practical terms, a learning object can be viewed as a well-defined module inside a course, with a couple of added niceties. A learning object can be created, stored, managed, delivered, tracked, reported on, and improved independent of any specific course. And it can be reused and shared by multiple courses.

The subject of learning objects causes violent arguments among even the most mild-mannered instructional designers, so we'll talk about them in a future column.

LCMS ingredients

A good LCMS needs the right mix of

- authoring and content-creation capabilities
- support for a wide variety of content formats
- robust model for creating and managing learning objects
- scalable object repository (the database where everything gets stored)
- good search-and-browse capabilities
- ability to personalize delivery of content
- detailed tracking and reporting capabilities.

That's a lot of features, but the majority of well-known LCMSs currently on the market have most of those qualities and usually differ only in the amount of richness offered in specific aspects of the mix.

Typically, the authoring component enables creation of content from scratch, as well as the assembly and re-purposing of existing content—created through such external tools as PowerPoint, Word, PDF files, or custom e-learning courses. In some cases, the authoring component can enable collaborative team authoring with sophisticated version control and project management capabilities.

The object repository is nothing more than a database of learning objects. The metadata of the learning objects is used to categorize and locate them. The delivery component often assembles learning objects in the database dynamically to deliver a personalized learning experience based on the specific learning needs or style of the individual user. As each learning object is delivered, the system tracks the details of what is delivered to whom, usually producing simple usage reports. In some cases, the system uses detailed tracking and even offers insight on where the content needs improvement.

LCMS or LMS?

Contrary to some assertions, the arrival of LCMSs hasn't eliminated the need for or the value of LMSs, which stands for learning management system. An LCMS is content focused: It tackles the challenges of creating, reusing, managing, and delivering content.

An LMS is learner and organization focused: It's concerned with the logistics of managing learners, learning activities, and the competency mapping of an organization. The learning activities managed through an LMS can be any form, including instructor-led training and e-learning courseware. An LMS usually lets learners keep track of individual skills and competencies, and helps locate and register learners for relevant learning activities that enable them to acquire new skills or improve existing skills. An LMS also helps administrators manage and track the relationship between the users and learning activities, including progress on different activities, and the competencies and skill levels acquired.

LCMSs and LMSs are distinct in focus but complementary. Together, they form a powerful combination for a robust e-learning platform. But don't take the integration between an LCMS and an LMS for granted. For the combined solution to be successful, they ought to interoperate effectively in at least two key areas:

Tracking. Typically, an LCMS is much closer to the content than an LMS. An LCMS has intimate knowledge of the structure and flow of content. In some cases, it even changes the content flow on the fly to provide personalization. Though most LCMSs provide detailed tracking of all interaction between the user and the content, the mechanism of how the tracked information in the LCMS is rolled up and sent to the LMS is an important consideration for the smooth functioning of the combined systems. Standards such as SCORM

(sharable content object reference model; more about that in a future column) offer a basic solution. However, SCORM was created to address the interoperability between content and LMS specifically, not necessarily LCMS and LMS. So, when an LCMS is said to be SCORM compliant, we can't assume it would interoperate smoothly with any SCORM-compliant LMS. More analysis would be required to determine whether they'd work together well.

Personalized delivery. Though the delivery aspects are an integral part of the LCMS, often the LMS is the system that maintains most of the user information needed to personalize delivery—such as user profile, background, job functions, and preferences. The mechanism of how the LCMS obtains that information from the LMS in real time to offer successful personalized delivery is another important consideration for the smooth functioning of the combined systems.

Is an LCMS in your future? It seems clear that if you want to experience what e-learning promises, you'll need to have the functionality of an LCMS present. All it needs now is a clearer term. Despite the silly acronym, LCMSs will be as important to the growth of e-learning as LMSs have been.

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Questions About
E-Learning?

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