

# THE **e**LEARNING DEVELOPERS' JOURNAL™

Strategies and Techniques for Designers,  
Developers, and Managers of eLearning

JOURNAL™

## THIS WEEK — MANAGEMENT STRATEGIES

### Steps to Creating a Content Strategy for Your Organization

BY ELLEN D. WAGNER

**D**igital content — especially content that has been constructed using a learning-object oriented approach to its design and development — makes it possible to create personalized learning programs and performance support tools. This article describes how enterprises are re-assessing the strategic value of their content as they look for ways to better leverage intellectual property in support

of improved learning and performance across the entire organization.

One of the first steps is to develop an organizational content strategy. A content strategy has many components but at the heart of every strategy will be found a content model. This model structures, organizes, and differentiates all the elements within the enterprise content universe.

#### The evolving significance of content

We live in a world where we can send email on our mobile phones, take snapshots with our handheld computers and literally converse with colleagues online. As our colleague Wayne Hodgins of Autodesk suggests, consider the possibilities in an enterprise-wide learning strategy that leverages the power of all of its digital content

creation and distribution capacity to deliver:

- Just the right content, to
- Just the right person, at
- Just the right time, on
- Just the right device, in
- Just the right context, in
- Just the right way.

Digital content promises to take learning to the next level of personalization and relevancy because it offers a way to construct, assemble and reassemble learning and performance support assets based on the needs, interests, and requirements of learners. Imagine logging onto your company's knowledge base to pick out some learning modules to load on your portable computer — and then copying some practice objects from those modules to your

*Continued on next page*

*Content always plays a critical role in supporting the learning function in organizations. It has now evolved to become a key resource fueling organizational innovation. To leverage intellectual property in support of this role across the enterprise, the first step is to develop a content strategy. In this article, allow the experts to show you how to take your learning to the next level ...*

A publication of



PDA so you can practice on that long flight later in the week. Imagine emailing practice results using your mobile phone and getting a voicemail with feedback on your submission. All of a sudden, “anytime, anywhere” learning may really mean what it says. (See the March 19 issue of *The eLearning Developers’ Journal*, “Stolen Moments for Learning” by David Metcalf.)

Content has always played a critical role in the learning and performance support function in organizations. However, over the past ten years, the form and function of content itself has evolved, offering organizations new opportunities for realizing new value. What has changed to elevate the status of content to that of a strategic resource fueling organizational innovation?

A number of significant developments have occurred to change the role and function of digital content, not the least of which was the growth and evolution of the Internet itself. It was not so long ago, in 1993 to be precise, that federal legislation first allowed the National Science Foundation to open the NSFNET Internet backbone to commercial users, resulting in the first appearance of suffixes designating

one’s organizational type including the now infamous “.com”. Also in 1993, the University of Illinois announced the release of Mosaic, a new type of computer program known as a browser. Mosaic incorporated a set of access protocols and display standards originally developed at the European Organization for Nuclear Research (CERN) by Tim Berners-Lee for a new Internet application called the World Wide Web (WWW).

In 1995, a report by the Department of Commerce Information Infrastructure Working Group on Intellectual Property, Rights, and Information noted the emergence of the National Information Infrastructure (NII) and predicted that the NII — colloquially called the Internet — would result in an explosion of digital content. The report observed that an information infrastructure had been in existence in the U.S. for some time, but also noted that it had never before been integrated into a single entity:

“Telephones, televisions, radios, computer and fax machines are used every day to receive, store, process, perform, display and transmit data, text, voice, sound and images in homes and businesses through-

out the country. Fiber optics, wires, cables, switchers, routers, microwave networks, satellites and other communication technologies currently connect telephones, computers and fax machines. The National Information Infrastructure of tomorrow, however, will be much more than these separate communications networks. It will integrate them into an advanced, high-speed, interactive, broadband, digital communications system. Computers, telephones, televisions, radios, fax machines and more will be linked by the NII and users will be able to communicate and interact with other computers, telephones, televisions, radios, fax machines and more — all in digital form.”

Now, fast-forward a mere seven years. (*It’s only been seven years!*) The Internet is ubiquitous. It has already spawned one of the greatest economic boom-and-bust cycles ever. Conventional publishing, production and distribution have been radically altered by powerful and relatively inexpensive software and hardware tools. The learning press reports that software applications such as Microsoft Word, Microsoft PowerPoint and Macromedia Flash are the most popular online content development

**November 12 — 15, 2002**  
**San Diego, CA**



**It’s *Focus Time...***

**Time to Focus on Proven Strategies,  
Techniques, and Technologies for e-Learning**

- Learn from powerful real-life case studies
- Develop new skills to move your organization forward
- Discover ways to leverage limited resources
- Network within your professional community
- Share, Discuss, Debate, and be Challenged...

Produced by



tools, which puts the capacity for professional quality digital content creation and distribution in the hands of mere mortals.

Today, digital content surrounds us in multiple forms and file types which can be copied, modified, and shared on an unlimited scale. Knowledge management methodologies and tools help make the tacit explicit, capturing knowledge about processes and procedures that, in the past, had walked out the door every time an employee moved from job to job or from company to company. Every memo, email and collateral marketing piece is a candidate for inclusion in the enterprise knowledge base.

Furthermore, new means of creating shared content continue to emerge. Web logs, or blogs (e.g., <http://www.blogger.com> and <http://radio.userland.com> to name two examples) serve as the core of communities of interest organized around self-publishing and group publishing. Wiki (<http://c2.com/cgi/wiki>) represents a new medium for collaborative meaning-making. Wiki enables users to freely create and edit Web page content using any Web browser. It allows the organization of contributions to be edited in addition to the content itself. The WikiWiki Web defines wiki as "...a composition system; it's a discussion medium; it's a repository; it's a mail system; it's a tool for collaboration. Really, we don't know quite what it is, but it's a fun way of communicating asynchronously across the network."

The deluge of new information long ago became a flood. Today's challenges revolve as much around not drowning in a sea of content as they do about ensuring that a sufficient quantity of quality content is available, and ensuring that each individual content asset can be easily located, used, adapted, and stored again for future use.

### Why metadata matters

No content strategy will be complete without responding to this most fundamental question: How will we find the content we want for any given device, when and where we need it?

One of the most active areas in today's learning and technology standards world relates directly and specifically to metadata. Metadata gives developers the power to specify the attributes of the desired instructional content. Metadata makes searching more efficient and, since digital content is easy to describe and locate, it is feasible to reuse objects in different courses and performance support applications,

## The Learning Objects Forum at The eLearning Guild Annual Conference

A special two-day Learning Objects Forum (LO Forum) will be held at *The eLearning Guild Annual Conference*. Throughout this forum, participants will be briefed on a wide range of issues ranging from protocols to enterprise implementation. Come learn about the issues, opportunities and solutions that learning objects bring to enterprise learning, e-Learning and knowledge management. Hear how learning designers respond to the real-world challenge of creating object-oriented learning designs. Experience-tested guidelines for designing object-based learning and performance improvement systems, along with plenty of practice-based examples will be featured. The LO Forum is included in your registration for the Annual Conference. Sessions include:

### Learning Object Basics for Instructional Designers

*Joanne Mowat, President, The Herridge Group, Inc.*

As companies move toward a reusable learning object architecture, instructional designers are being asked to suddenly change what they do and how they do it. A different perception, process and skill set must be developed to migrate from course and web designers to learning object creators. This session explores how the design of objects is different from the design of traditional and web-based learning and support. It will cover key terms, offer real-life examples of learning object projects, and consider design implications of reusability and interoperability.

### The Cisco Systems Case Study

*Peg Maddocks, Director of eLearning, Cisco Systems*

Cisco Systems has been a pioneer in the development and application of learning objects and content objects. At this session you will hear about the past, present and future uses of Learning Objects at Cisco.

### AICC, SCORM, and SOAP: The Real Dirt

*Alex Kilpatrick, Chief Scientist, HCI Training*

The complexity and diversity of existing standards for courseware to LMS communication and metadata is confusing at best. This session presents participants with the basics of AICC (Aviation Industry CBT Committee), SCORM (Sharable Content Object Reference Model) and SOAP (Simple Object Access Protocol). This session is targeted toward novices and will explain how these protocols work, their limitations, benefits and future standards.

### Rich Internet Applications and LOs: Macromedia's MX Strategy

*Tanya Heins, Senior Product Manager eLearning and Education, Macromedia*  
*Judy Brown, Analyst, University of Wisconsin/Academic ADL Co-LAB*

This session outlines how organizations are re-evaluating the strategic value of their content assets and are looking for ways to leverage those assets to support enterprise learning. Learn more about Macromedia's MX strategy for improving the quality and capacity of content creation, development and distribution efforts.

### More New Directions in Learning Object Design

*Ellen Wagner, Director of Learning Technologies, Learnativity Alliance*  
*Robby Robson, President, Eduworks Corporation*

This session speculates on the future of learning objects, and describes how the content model for learning objects fits within this larger vision of the future of learning. It poses some provocative yet pragmatic points to ponder, and hopes to stimulate new thinking and ideas.

**For more information about this event, see**

<http://www.eLearningguild.com/pbuild/linkbuilder.cfm?selection=doc.149>

and to distribute them using a variety of devices.

Simply stated, metadata is information that describes the attributes of data so users can find it after it has been stored. In general, metadata describes attributes associated with individual data files. There are two types of metadata.

Objective metadata, most of which can be generated automatically, describes characteristics such as file type and size, date, author, operational requirements, costs, identification numbers, and ownership. You've probably already experienced how Microsoft Office applications assign objective metadata to your files — for example, that little window that pops up every so often to identify the author of a document. Have you seen that little dialog box asking whether or not you want to merge the previous version of your document with the current version? That's objective metadata, too.

Subjective metadata are more varied and often describe the most useful information about a content object, because they capture what may be otherwise undocumented knowledge, context, perspectives, and opinions. Subjective metadata can be provided by anyone, and as a result there may be a lot of it, and it will not necessarily reflect any consensus. Typical subjective

metadata might include notes on the type of granularity of an object, a description of the pedagogical purpose of the object, or assessments and learning objectives associated with the object.

Another critical characteristic of metadata is the ability to have an unlimited number of metadata records for any single piece of information. This is particularly obvious in subjective metadata as they capture opinions, any numbers of which are available for a single object. In short, metadata provides the solution to the problem of finding content assets once they have been captured and stored in a database.

Imagine the challenge of using the same five words to describe yourself on any given day over a period of several days. Now imagine what five close friends might say — would they use the same words to describe you that you did? What about five co-workers — would they use any of the same words? A consistent naming convention is an obvious requirement for a common naming framework — and that is in fact the role that learning object metadata standards play.

Common standards for metadata are essential for the success of object-oriented learning designs. Generally speaking, learn-

ing object standards are either learning- or technology-focused.

Learning-focused standards tend to address issues related to content, metadata, and the establishment of a learning management system data model. Technology-focused standards typically address issues associated with the interoperability of HTML, HTTP, XML, Java, and JavaScript.

Fortunately, much work to create metadata standards for learning objects and related content objects is underway all around the world by groups such as IEEE Learning Technology Standards Committee (IEEE LTSC), the Instructional Management Systems Project (IMS), the World Wide Web Consortium (W3C), and the Alliance of Remote Instructional Authoring and Distribution Networks for Europe (ARIADNE) Project.

## The value of a content object reference model

Defining and understanding learning objects has been a challenge because they need to be viewed within the context of an overall conceptual model that is based on a hierarchy of granularity. By showing the relative relationships of different content constructions it is easier to conceptualize how small content elements can be

## The eLearning Guild's Advisory Board

A leading organization needs focused leadership. **The eLearning Guild** is proud to have the support and guidance of these industry leaders serving on its Advisory Board:



**Ruth Clark**  
Author and Principal,  
Clark Training &  
Consulting



**Conrad Gottfredson**  
Principal  
Conduit Tecknowledgy



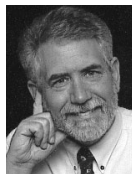
**John Hartnett**  
President  
BlueMissile, Inc.



**Bill Horton**  
Author and Principal  
William Horton  
Consulting



**Kevin Moore**  
Chief Learning Officer  
A.F. Kelly Associates



**Eric Parks**  
President  
ASK International, Inc.



**Marc Rosenberg**  
Author and Principal  
DiamondCluster  
International



**Allison Rossett**  
Professor and Author  
San Diego State  
University



assembled, disassembled, and reassembled as needed. This results in an almost infinite flexibility that allows users to create logical assemblies from smaller learning objects to meet individual needs.

The Learnativity Content Model shown in Figure 1 was designed to help visualize how content can be organized for e-Learning and knowledge management applications. It illustrates the relationship among varying kinds and sizes of data files likely to be a part of any e-Learning or knowledge management solution.

As shown in this model, the most granular of the files are the *Content Assets*. Content Assets include raw media such as photographs, illustrations, diagrams, audio and video files, animations, and applets to name a few examples.

*Information Objects* comprise the next level in this model. An Information Object is classified as a Concept, a Fact, a Process, a Principle, a Command Reference, an Exercise, or a Procedure.

Individual Information Objects can be combined to form a more conceptually complete data structure called a *Learning Object*. Learning Objects are formed by assembling a collection of relevant reusable information objects to teach a common job task on a single (enabling) learning objective. While learning object definitions vary from organization to organization, many current definitions include practice and assessment elements.

Learning objects may be sequenced and bundled to form larger *Learning Components*, such as "Lessons" and "Courses." When these Learning Components are wrapped with additional functionality such as communication tools, peer-to-peer computing and other community-of-practice-specific support, and the coming wave of modular web services learning components built upon learning objects, this enables the design and creation of *Learning Environments*.

The strength of a content model such as the one shown in Figure 1 is that it forms the basis for organization-specific plans that extend the architecture for content. In some cases that may mean adding a layer to describe instructional and learning design features, while in others it might involve a whole new architecture for learning, or for performance support. This content model also helps to visualize the relationship between granularity and reusability: The more granular the content, the more likely it is that content will be reused. The more content is contextualized in

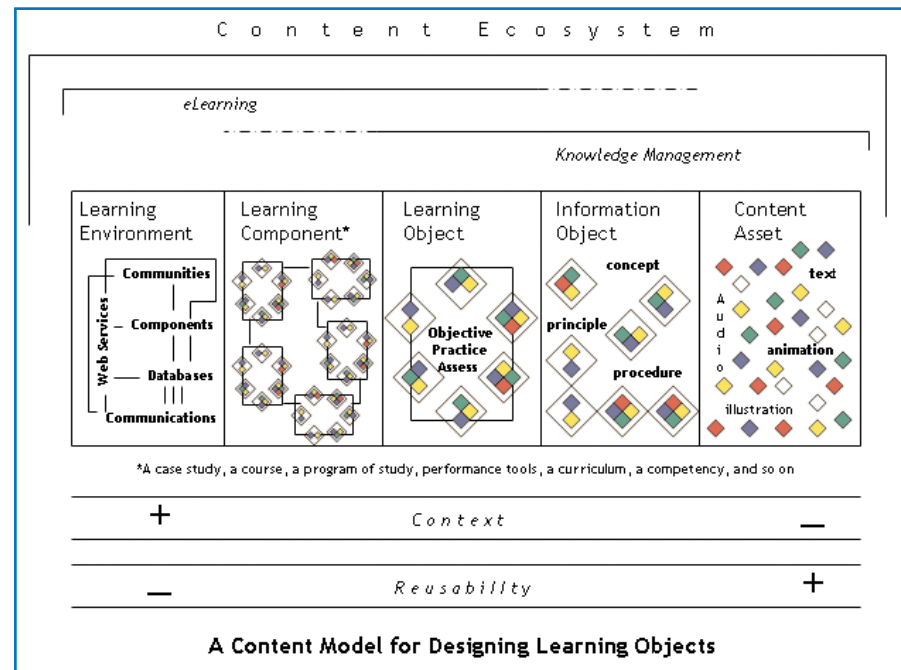


FIGURE 1 The Learnativity Content Model.

learning objects, components and environments, the less likely it is that it will be reused without modification.

**Other content strategy considerations**

Defining a content strategy demands that an enterprise determine what its content assets are, and then determine what additional value can be derived from leveraging those content assets in the service of its mission, purpose and principles. Successful implementation of an enterprise content strategy then depends upon identifying organizational e-Learning and knowledge management needs. It also means responding to those needs with creative, flexible, innovative solutions for content creation, design, development, distribution and management. Here are a number of steps to consider as you navigate your way through the maze of content-asset enabled learning and knowledge management opportunities:

*Conduct a Content Audit to evaluate your current content assets* already captured by courses, performance support tools, print resources, assessments, support services, and access to subject matter experts. This process of assessing and evaluating content resources includes such diverse activities as identifying self-contained content modules within the existing course (to begin the process of defining the conceptual parameters of a content object) and creating a relational content

map of curricula and programs to see where topics and themes overlap. When you conduct your Content Audit don't forget to include organizational knowledge assets such as internal reports, business plans, presentations, reference manuals, style guides, product descriptions, policies and procedures, and more.

*Determine which legacy content (e.g., printed learning materials) should be converted to digital content.* This may involve a multi-staged process that includes such activities as identifying self-contained learning content modules and creating content and concept maps for each curriculum and program. It will be important to evaluate the relative ease or difficulty of converting content to digital resources tagged for storage and retrieval in an object-base. Constraints (e.g. budget, timeline, production value, bandwidth, database requirements, hosting requirements) need to be articulated so that the impacts of such constraints on an implementation are understood.

*Determine the storage requirements for an object-base for digitized content assets.* What other options exist for ensuring greatest access to content assets for those who need them? The diversity of content formats and topics likely to be contained in a learning object-base may create the need to standardize a set of content guidelines.

*Determine the network infrastructure, server and database requirements* for hosting and for efficiently distributing con-

tent in meaningful arrays (e.g. courses, objects, competency models, performance support tools, and so on). The technical specifications for e-Learning implementation will need to accommodate both the essential and the desirable feature sets. For example, if an e-Learning site is primarily to be used as a content distribution system, it may not need the same level of learning management system or collaboration system functionality that would be needed in a more "full-service" e-Learning provider model. Bandwidth requirements must be considered, as will the need for video or multimedia servers, collaboration services, file sharing, groupware and so on.

Determine how object interoperability and reusability are likely to affect your e-Learning strategy. This will determine the necessity for adhering to commonly used metadata schemas for tagging content. It means understanding the implications of SCORM and of the Learning Object Metadata standard recently approved by the IEEE.

## SPECIAL THANKS TO THESE GUILD ENTERPRISE SPONSORS

**CLARK Training & Consulting (CTC)** is a global leader in instructional design offering both training and consulting services. Our award-winning seminars are based on the latest research in instructional psychology and human performance improvement.



www.clarktraining.com  
Contact: Kimberly Perkins  
602-230-9190

**Cyclone Interactive** is an interactive media and web development firm creating online, CD and presentation solutions for a wide range of clients and industries.



www.cycloneinteractive.com  
Contact: Earl Dimaculangan  
earl@cycloneinteractive.com  
617.350.8834

**Spectra Interactive Learning** is a unique, full-service e-Learning consulting company — growing and expanding in North America and Europe to meet the growing need for expertise in e-Learning strategy development, instructional design and program implementation.



www.spectrainteractive.com  
Contact: Brenda Pfaus, President  
bpfau@spectrainteractive.com  
Ottawa, Canada (613) 230-9978

To learn how to become a **Guild** Enterprise Sponsor, please contact David Holcombe at [dh@eLearningGuild.com](mailto:dh@eLearningGuild.com) or call 707.566.8990.

Consider staffing and resource requirements needed to implement and maintain your enterprise learning initiative. Generate a budget to get a sense of real costs likely to be associated with such an effort.

Develop a plan that ensures the greatest "reusability" of content by:

- Creating a content map for each course in your curriculum. This is an essential first step in determining the degree to which content is currently being used and "reused."
- Determining which courses will offer the greatest likelihood of reusability success. Be sure to factor in localization/translation requirements across all courses.
- Comparing the content map with the enterprise learning map to determine organizational priorities for creating learning objects.

Finally, don't forget to select the best tools for conceptualizing, creating and maintaining e-Learning content, and determine the best development and distribution environment for distributing and managing e-Learning content.

Knowledge management best practices wisdom suggests that different kinds of content will call for different content management strategies. These strategies are dependent upon the assignment of objective and subjective metadata that identify and describe each individual content asset. Factors that differentiate the various kinds of content and content management strategies include:

- Some content is stable, while other content is dynamic and subject to change.
- Some knowledge declares facts or concepts, while other knowledge is procedural or rule-based. Validity, reliability and currency of information require overt management.
- Some content is about other information, or is related in particular ways to other content.
- Some content is descriptive, illustrative, or demonstrative. It presents problem sets, scenarios, directions, or applications.

## Linking your content strategy to e-Learning

For many organizations, the logical application for a content strategy is to serve as the foundation for enterprise-wide learning using an object-oriented, e-Learning architecture. The probability of implementing a successful e-Learning initiative greatly increases when an organization determines which of its enterprise learning

---

Selecting a learning management infrastructure is one of the most strategic e-Learning decisions that you will make. By first determining what needs to be managed, it's much easier to find a system that responds to those needs.

---

needs will be effectively served by using e-Learning strategies, methods, tactics and tools, thus creating an over-arching learning and performance improvement environment.

When people across an enterprise talk about e-Learning, the only thing that may be common among them is that the Web is involved somehow, somewhere, sometimes. To some, e-Learning may simply designate the involvement of the World Wide Web to support personalized professional development and performance improvement. Conversely, to others, it may represent the implementation of a tightly defined learning experience with explicitly-stated performance outcomes, offered to a fixed number of people during a fixed period of time. Or, to yet others, it may represent some variation of online help, or of a content search and retrieval capability.

First and foremost, organizations will find it useful to identify the key success metrics that e-Learning will be expected to achieve in that organization: More learners served? More tests passed? More employees retained over time? Fewer customer complaints? Faster turn-around on orders? It will then be important to prioritize which of those measures of success are most important.

Secondly, it is useful to consider the wide variety of learning, performance support and professional development activities needed to enable an enterprise e-Learning strategy. An organization should consider the following key questions when assessing its e-Learning readiness:

- Will the needs of individual learners be

addressed through personalization of learning programs?

- Will learners “march” through a fairly specific curriculum, or will they move toward a problem-based learning strategy that builds problem solving skills. Or will they be called upon to do both of those and everything in between?
- Will content be available in formats smaller than complete courses?
- Will individual learners need to take responsibility for managing their own professional development?
- Will learning results be tied to the organization’s measures of business success? If so, which ones are most likely to be linked?
- Is technology currently used to support distributed learning? Are sites currently networked?
- What kind of bandwidth capacity is available?
- What technology platform standards currently exist?
- Is there interest in decentralizing the training operations to give a greater sense of “just-in-time” performance support?
- What performance improvement problems need to be resolved? How are these needs prioritized?
- What kinds of resources are accessible for getting the job done?
- How are the organization’s content assets going to be leveraged within its enterprise e-Learning strategy?

**The critical role of learning and content management**

A critical component of any content strategy will involve the selection of a system to store, manage, maintain and track the modifications made to content resources. Selecting a learning management infrastructure is one of the most strategic e-Learning decisions that companies will make. Today’s choices involve both learning management systems (LMS) and learning content management systems (LCMS). An organization must determine the kinds of things that need to be managed in order to ensure the smooth delivery of learning content resources and support. By first determining what needs to be managed, it’s much easier to find a system that responds to those needs.

Learning management systems (LMSs) are suites of tools that deliver the right course to the right students, at the right time, in the right format. LMSs help address an organization’s need for:

<b>TABLE 1: LMS Features</b>	
<b>LMS feature</b>	<b>Function</b>
IT Setup Requirements	To ensure compatibility with, and impact upon, an organization's IT infrastructure.
User Setup Requirements	To create and maintain user records.
Skills Management Setup Requirements	To capture and organize skills management information.
Formal Learning Event Definitions and Resources Management	To create and maintain records on formal learning events and relevant resources.
Records Keeping/Hosting	To usefully store the tracking of relevant resources and formal learning events.
Maintaining Student Sites	To create and maintain the users' learning interface.
Access to Libraries	To present a comprehensive library to the users of both off-the-shelf and custom content, as well as selection tools.
Student Initial and Post Tests	To determine and use the users' knowledge level.
Registration Capabilities	To automate most of the registration process and enable user self-registration.
Student Launch	To launch and track learning events.
Automated Support of Learning Activities	To automate many of the traditional roles of a training organization.
Evaluations	To measure, or support in the measurement of, the impact of the deployment of learning events.
Reporting	To produce reports, including automated gathering of data and formatting and distribution of relevant information.
Records Keeping/Hosting	To usefully store the tracking of relevant resources and formal learning events.
Storage of E-Learning Material	To store a variety of e-Learning materials.
Connectivity/Standards to Support	To exchange information with other organization applications.
Support Provided	The additional services and support services offered.

Clark Aldrich (2000) *Choosing a Learning Management Solution Provider*. Gartner Group.

- Online courseware available for individuals anytime, anywhere.
- Capacity for assessing individual and organization learning and then relating improvements in these to business goals and performance.
- Tools to manage organization knowledge and competency, and to close skill gaps throughout the organization by matching learning needs with online courses

In his 2000 Gartner Group report, Clark Aldrich suggests that organizations evaluate their LMS needs by using the checklist of LMS feature sets shown in Table 1.

In the past several years, LMS providers have added system functionality that addresses content management. Learning content management systems (LCMSs) are more directly concerned with storing content files, managing revisions and modifications, and ensuring that content is tagged

for easy retrieval and reuse. Systems that are intended to manage learning content are less concerned with student-content interactions and more concerned with issues of content storage, modification, assembly and retrieval. However, because content management in these systems is intended for learning applications, learning content management systems will often include feature sets found in conventional LMSs. A brief summary of the major differences between learning management and content management systems is shown in Table 2 on page 8.

**The future of learning content**

Even though significant advancements regarding the role and function of content as an organizational asset have been achieved, so many questions are as yet unanswered:

- Can content teach?




**TABLE 2: Comparison of Learning and Content Management Systems**

Learning Management Systems	Content Management Systems
<ul style="list-style-type: none"> <li>• Offers improved delivery and tracking of content</li> <li>• Used by learners and administrators</li> <li>• Typically offers courses</li> <li>• Key Features:                             <ul style="list-style-type: none"> <li>– Learner records database</li> <li>– Event schedules</li> <li>– Course catalogues and registration</li> <li>– Assessment services</li> <li>– Competence management</li> <li>– User-profile management</li> <li>– Integration with learning-content management systems</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Offers improved creation and management of content</li> <li>• Used by content developers</li> <li>• Assembles learning objects</li> <li>• Key Features:                             <ul style="list-style-type: none"> <li>– Learning Object Repository</li> <li>– Meta-tagging for search capabilities</li> <li>– Collaborative authoring and editing</li> <li>– Content conversion and assembly</li> <li>– Personalized adaptive delivery</li> <li>– Integration with learning management systems</li> </ul> </li> </ul>

Rob Edmonds and Tom Barron (2002) *Learning Objects In Practice*. Menlo Park, CA: SRI Consulting Business Intelligence.

- DO standards for learning and content matter?
- Does content design differ from instructional design?
- Does learning design using content objects call for different skills needed for instructional design?
- What makes “learning” content different from “regular” content?
- What is it going to take to establish an object economy?
- What is the value proposition for learning content?
- Is the business case for learning content for learning, e-Learning, and performance support sustainable, scalable and transferable within an organization, an enterprise, an industry?
- What metrics best make the case for determining the value of e-Learning content in an organization?
- Is there a significant increase in the effectiveness of learning that will be derived from new models for learning and content?

The next generation of personalized learning and performance support will depend upon better understandings of the relationships among content, learning management and knowledge management. Answers to these and other related questions will be required to shape the future of organizational responsive enterprise learning. In the meantime, we’ll be exploring these issues and many more in San Diego during the Learning Objects Forum at *The eLearning Guild Annual Conference*. 

## The next generation of personalized learning and performance support will depend upon better understanding of the relationships between content, learning, and knowledge.

### AUTHOR CONTACT



Ellen Wagner is Director of Learning Technologies with the Learnativity Alliance, a small research institute and advisory services practice, dedicated to furthering the notion that learning

is a transformative process allowing individuals to improve their situations and ensuring organizations capitalize on core strengths. Dr. Wagner leads the Learnativity Alliance’s efforts to explore how technology systems of various kinds can make it easier for people to learn when, where, and how they want to. She is particularly interested in research and best practice examples that help designers create learner-centered templates and tools for assembling reusable learning objects in meaningful ways.

Dr. Wagner has written extensively on instructional design, evaluation, and distance learning. Combined with hundreds

of national and international conference presentations, she is a much sought-after speaker in the field. She recently co-authored the book, *Managing Web-Based Training*, with Alan Ellis and Warren Longmire, that was published by the American Society for Training and Development. Dr. Wagner is currently a member of the Board of Directors of the Division for Instructional Development, Association for Educational Communications and Technology, and is a contributing editor to *Educational Technology*, the *American Journal of Distance Education*, *Educational Technology Research and Development (ETR&D)*, and the *International Journal of Educational Telecommunications*.

Before joining Informania, Dr. Wagner had a successful career as a tenured university professor and administrator. She was Associate Professor and Chair of the Educational Technology Program at the University of Northern Colorado, as well as Director of UNC’S Western Institute for Distance Education. She was also Visiting Scholar and Project Director at the Western Cooperative for Educational Telecommunication, Western Interstate Commission on Higher Education.

Dr. Wagner’s Ph.D. in Educational Psychology is from the University of Colorado, Boulder; her MS and BA degrees were earned at the University of Wisconsin, Madison.

### SIG TALK DISCUSSIONS

Extend your learning beyond the printed page! If you are looking for more information on this topic, if you have questions about an article, or if you disagree with a viewpoint stated in this article, then join the SIG Talk discussions online and extend your learning.

#### Follow these easy steps to participate:

1. Go to [www.eLearningGuild.com](http://www.eLearningGuild.com)
2. Click on the SIG Talk button on the main menu.
3. Using the pull down menu, select the SIG Talk discussion: Journal Topics
4. Select this article from the Subject list.
5. Click on ADD A NEW MESSAGE.
6. Enter your message. It will be posted as soon as you hit the Submit button on the form.



**Publisher** David Holcombe

**Editorial Director** Heidi Fisk

**Editor** Bill Brandon

**Copy Editor** Charles Holcombe

**Design Director** Nancy Marland

**The eLearning Guild™ Advisory Board**

Ruth Clark, Conrad Gottfredson, John Hartnett,  
Bill Horton, Kevin Moore, Eric Parks,  
Marc Rosenber, Allison Rossett

Copyright 2002. **The eLearning Developers' Journal™**.  
Compilation copyright by The eLearning Guild 2002. All  
rights reserved. Please contact **The eLearning Guild** for  
reprint permission.

**The eLearning Developers' Journal** is published weekly  
by **The eLearning Guild**, 525 College Avenue, Suite  
215, Santa Rosa, CA 95404. Phone: 707.566.8990.

**The eLearning Guild** is an operating unit of Focuszone  
Media, Inc., 1030 Beatrice Street, Eagan, MN 55121.

**The Journal** is distributed to all **Guild** members free of  
charge. To join the **Guild** go to [www.eLearningGuild.com](http://www.eLearningGuild.com).

**The eLearning Developers' Journal™** is  
designed to serve the industry as a catalyst for  
innovation and as a vehicle for the dissemina-  
tion of new and practical strategies and tech-  
niques for e-Learning designers, developers and  
managers. The **Journal** is not intended to be  
the definitive authority. Rather, it is intended  
to be a medium through which e-Learning practi-  
tioners can share their knowledge, expertise  
and experience with others for the general  
betterment of the industry.

As in any profession, there are many differ-  
ent perspectives about the best strategies,  
techniques and tools one can employ to accom-  
plish a specific objective. This **Journal** will share  
these different perspectives and does not posi-  
tion any one as "the right way," but rather we  
position each article as "one of the right ways"  
for accomplishing a goal. We assume that  
readers will evaluate the merits of each article  
and use the ideas they contain in a manner  
appropriate for their specific situation. We  
encourage discussion and debate about articles  
and provide an online SIG Talk™ discussion  
board for each article.

The articles contained in the **Journal** are all  
written by people who are actively engaged in  
this profession at one level or another — not  
by paid journalists or writers. Submissions are  
always welcome at any time as are suggestions  
for articles and future topics. To learn more  
about how to submit articles and/or ideas,  
please refer to the directions on this page or  
visit [www.eLearningGuild.com](http://www.eLearningGuild.com).

## Get Published in...

This publication is by the people, for the people. That means it's written by YOU the readers and members of **The eLearning Guild!** We encourage you to submit articles for publication in the **Journal**.

Even if you have not been published before, we encourage you to submit a query if you have a great idea, technique, case study or practice to share with your peers in the e-Learning community. If your topic idea for an article is selected by the editors, you will be asked to submit a complete article on that topic. Don't worry if you have limited experience writing for publication. Our team of editors will work with you to polish your article and get it ready for publication in the **Journal**.

By sharing your expertise with the readers of the **Journal**, you not only add to the collective knowledge of the e-Learning community, you also gain the recognition of your peers in the industry and your organization.

### How to Submit a Query

If you have an idea for an article, please submit your article idea by:

- **Sending an email to** Bill Brandon at [bill@eLearningGuild.com](mailto:bill@eLearningGuild.com).
- **Include the following information in your query email message:**

- 1: The title of the article.
- 2: What will the article be about? What is the issue/problem that will be addressed?
- 3: Why is this issue important to the reader? Industry?
- 4: Why are you the one to tell this story?
- 5: List your contact information (name, job title, company, phone, email). This information should be for the WRITER of the article. NO agents please.

- **Limit the information above to approximately one page.**

If the topic appears to be of interest, we will ask you to submit an article. Refer to [www.eLearningGuild.com](http://www.eLearningGuild.com) for more details.



**The eLearning Guild™** is  
a Community of Practice  
for designers, developers,  
and managers of e-Learn-

ing. Through this member-driven community,  
we provide high-quality learning opportunities,  
networking services, resources, and publica-  
tions. Community members represent a diverse  
group of instructional designers, content devel-  
opers, web developers, project managers, con-  
tractors, consultants, and managers and direc-  
tors of training and learning services — all of  
whom share a common interest in e-Learning  
design, development, and management.

### The eLearning Developers' Journal™

The Guild publishes the only online "e-Journal"  
in the e-Learning industry that is focused on  
delivering real world "how to make it happen in  
your organization" information. The Journal is  
published weekly and features articles written  
by both industry experts and members who  
work every day in environments just like yours.  
As an active member, you will have unlimited  
access to the Journal archive.

### Guild Research

The Guild has an ongoing industry research  
service that conducts surveys on 20 topics  
each year. These topics are identified by the  
Research Advisory Committee. The data collect-  
ed is available for all members.

### Resources, Resources, Resources

The Guild hosts the e-Learning industries most  
comprehensive resource knowledge database.

Currently there are over 1,600 resources avail-  
able. Members have access to all of these  
resources and they can also post resources  
at any time!

### People Connecting With People

The Guild provides a variety of online member  
networking tools including SIG Talk™ discussion  
boards, and the Needs & Leads™ bulletin  
board. These services enable members to dis-  
cuss topics of importance, to ask others to  
help them find information they need, and to  
provide leads to other members.

### It's About Leadership

The Guild draws leadership from an amazing  
Advisory Board made up of individuals who pro-  
vide insight and guidance to help ensure that  
the Guild serves its constituency well. We are  
honored to have their active engagement and  
participation. The Guild has also established  
three committees made up of active members  
who help steer its editorial, events program and  
research efforts.

### Discounts, Discounts, Discounts

Guild members receive discounts on all Guild  
conferences and on other selected products  
and services. Your Guild membership will save  
you 20% off the list price of Guild event!

Membership is Completely FREE!

Yes, FREE! All you are required to do is com-  
plete a membership profile form and you will  
have access to everything listed above... and  
MORE! Join today at [www.eLearningGuild.com](http://www.eLearningGuild.com)!

**Become a member today — FREE! Join online at [www.eLearningGuild.com](http://www.eLearningGuild.com).**