

White Paper

Minimizing Learning Management Systems' (LMS') Risks and Limitations

Look Beyond Surface Features and Just Content To The "Engine"

"Not only were the changes made three times faster in the rules-based environment, but it also required only 20% of the labor...Rather than doing four major (new programs) per year, it's now possible to do one a month with far fewer people..."—*Intelligent Enterprise Magazine*, 11/05

Abstract

A 2005 edition of *Chief Learning Officer (CLO) Magazine* listed several Learning Management System (LMS) "Disadvantages" that should be considered and avoided at the time of selection or review, to achieve implementation success and for managing change over time that is easy, fast, flexible and low cost. The reported disadvantages to be avoided include:

- "Higher capital and implementation costs for an enterprise system
- Diverse content needs of multiple business units may be more difficult to meet
- High cost and complexity of integrating with ERP systems
- May be harder to provide timely response to line of business training needs
- Difficulty in providing diverse data and reporting needs of business units...
- Sufficient IT resources can be costly and may not be available."

According to leading knowledge industry sources, LMS's are turned over about every three years due to limitations encountered over time; a costly process that can be avoided. This paper examines the tradeoffs of utilizing a Learning Management System (LMS) built on a logic coding-based modular and customizable software architecture, versus one that is based on a Rules-based engine architecture. While differences at a high level may appear esoteric, the differences will have major impacts on the effectiveness of your training program and its advantages and disadvantages; and on costs, delays and risks, as summarized below, as changes must be introduced over time. Here are some differences.

Coding-Based Solution Changes

- New code must be developed
- Code revision testing must be for the entire application, not just a portion
- Delays are incurred
- Expense can be high
- Risk of extended impacts is high
- A standard product quickly becomes non-standard, introducing extra support costs and risks
- Business processes may have to change, encountering resistance
- The differences between HR needs for employees versus differing needs for external groups training can be lost

Rules-based Solution Changes

- Existing, tested objects are merely invoked and linked
- Much faster results
- Much less expensive results
- Only the new process must be tested, since "standard" links to other application elements are unchanged
- More safety is involved due to less new coding and related "bugs"
- A more "standard" product exists, reducing support costs and risks over time; "customized productization"
- Adaptability results in less internal change requirements over time

An LMS with a flexible Rules architecture has much more far reaching benefits than just saving money on customizations and configurations. For example, one key area is the ability to re-purpose content by a particular audience (role, group, hire status, experience level, skill gaps, etc.) and have the system auto-manage the administration of the content for those groups in varying ways without conflict, including overlaps.

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Look Beyond Surface Features To The "Engine"

Introduction

Choosing and using a successful Learning Management System (LMS) without costly limitations is important to any organization's ability to maximize the productivity of its human capital assets, whether they are internal employees or external resources that affect corporate results (such as independent agents and CSRs for insurance companies, or employees of distributors of an OEM company's products).

The key to making an excellent LMS decision is to avoid several known disadvantages that can limit overall success, and to select a system that can easily adapt to your company's inevitably changing business needs over time. The disadvantages cited by *CLO Magazine* were listed in the Abstract. Other disadvantages to be avoided can include:

- ❖ Internal political and other impacts required to significantly change existing business operations to adapt to a limited LMS, initially and over time;
- ❖ Business unit leaders not supportive of the program due to its impacts on their results versus goals, and executive bonuses;
- ❖ Too-slow implementation;
- ❖ Too much user difficulty to use;
- ❖ Programs changes and additions that are too slow and too expensive as business requirements change;
- ❖ Inadequate flexibility to meet present, changing and differing business process needs of all business units
- ❖ The many differences between external groups and internal groups' training can be lost.

Typical Needs and Changes

The number of knowledge improvement business process and other changes that may be needed by an organization over time is almost infinite. A few of the more familiar ones are:

<input type="checkbox"/> Changing program admin approval rights, including adding admin authority, changing it, etc. (Note: #1)
<input type="checkbox"/> Varying local agency or departmental learning programs and priorities constantly change internal courses and classes, assessments, certifications, etc. components
<input type="checkbox"/> Changing the components of a course or curriculum (e.g., pre-tests, pre-surveys, multiple contents, post-tests and surveys, etc., including its sequencing and/or its components (e.g., adding a pre-test component to a course with "opt-out" rights if a 90%+ score is achieved) (Note: #1)
<input type="checkbox"/> Adding a set of online courses to a set of instructor classes, for a re-defined curriculum to establish a "blended learning" program (Note: #2)
<input type="checkbox"/> Reconcile multiple, overlapping requirements (such as HR assigned courses versus Compliance assigned courses versus the Business Unit's needs) (Note: #1)
<input type="checkbox"/> Altering the "completion" requirements to include such elements as "grandfathering" (e.g., years of experience), opt-out testing, minimum scores on courses--with automated re-assignment for low scores, alternative courses or programs, etc. (Note: #3)
<input type="checkbox"/> Setting up recurring assignments based on many possible criteria, including conditional criteria (e.g., annual or semi-annual based on test scores or results versus goal) (Note: #2)
<input type="checkbox"/> Changes in the admin hierarchy or organization such as a changed organization for a learner, a new job title with new requirements, a location change for the learner, or a new requirement for learners at a location (such as adjusters in FL getting sudden hurricane adjusting training), a new designation, a new certification (often for compliance), training for performance variances (e.g., for a poor "360 evaluation"), etc. (Notes: #4)
<input type="checkbox"/> New groups being introduced or developed (a new subsidiary, new independent agencies being recruited, new distributors, etc.) (Notes: #3 & #4)
<input type="checkbox"/> Changing assignment timings based on many possible criteria (Notes: #1 & #2)
<input type="checkbox"/> Customize courses or material content by state, program, time or multiple criteria (Note: #1)
<input type="checkbox"/> Changing email notification requirements (Notes: #2 & #4)

Notes:

1. Distributed Authority
In all successful organizations there are lines of authority and responsibility that collaborate and sometimes even overlap. The rules should model scope of control for:
 - content authoring and publishing
 - “Top down” HR or enterprise goals and policies
 - “Bottom up” Regional or departmental trainers and programs that target specific needs and objectives
 - Self study Access to self-improvement and reference material in a controlled environment.
2. New Demands on training and training materials:
 - New training programs for certification or compliance
 - New expectations from students on content quality and form (PowerPoint vs. Video, etc)
3. Innovation & Process improvement:
 - Competitive innovation requires effective communication and training of new processes quickly and deftly to affect the bottom line.
 - Identification of skills gaps and training programs to close the gap
4. The “24x7” business environment, making it impossible to take the training system “offline” for extended periods of time.

The Benefits To Be Gained By A Well Designed LMS Strategy and Rules Architecture (“Engine”)

The implementation of a Rules-based LMS engine has many advantages:

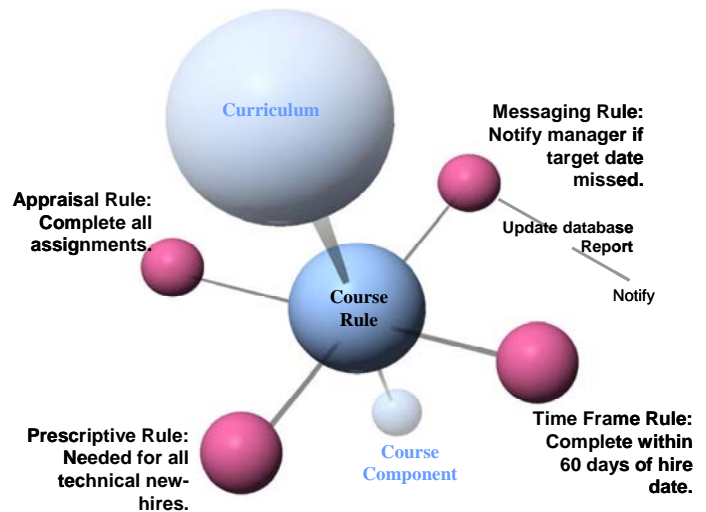
- ✓ Each business unit gets exactly what it needs, without limitations caused by what others are doing or by IT’s or HR’s priorities if they conflict with the business unit’s needs (Note: Business units are the “horse” that drives corporate results. Keeping the horse versus the cart as the prime focus is key to the success of any LMS);
- ✓ The LMS is highly adaptable at implementation, meaning minimum adaptation challenges for the business units; minimum change management costs and limited operations impacts on revenues, costs and compliance;
- ✓ Implementation is fast and low cost;
- ✓ Inevitable changes over time are fast and low cost, and do not limit or change past programs;
- ✓ Integrations to corporate level ERP and HR systems are easy and low cost;
- ✓ External groups’ training can be kept separate from internal employees’ training.

Understanding How “Rules” Objects Work

As Rule objects are combined they form knowledge program “models” (that become larger “objects” learning programs themselves) that can be used over and over. The below graphic overviews a simplified learning program model.

As elements of the model change new Rule objects can be quickly “plugged in” to the model, using standardized interfacing Rules. No “regression testing” of the full application is needed since the only change is the Rules interface to the new Rule.

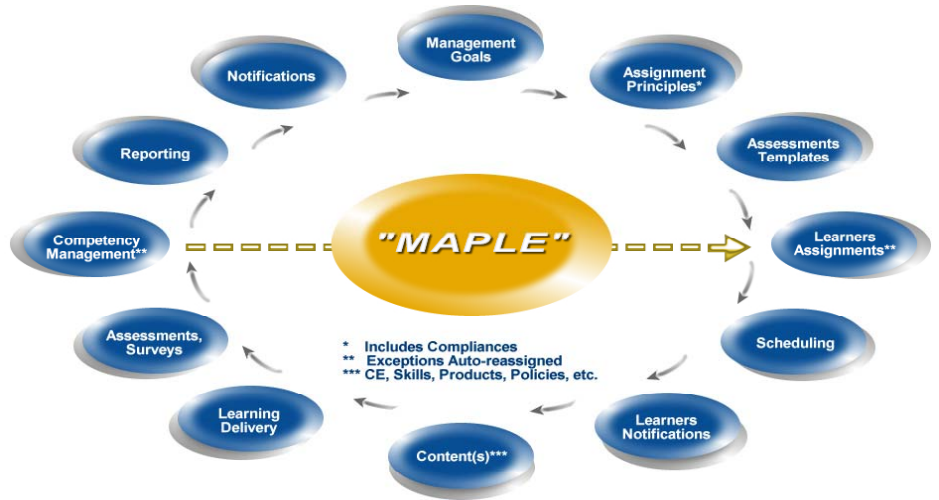
Example of a Typical Structural Rules Set—A “Model”



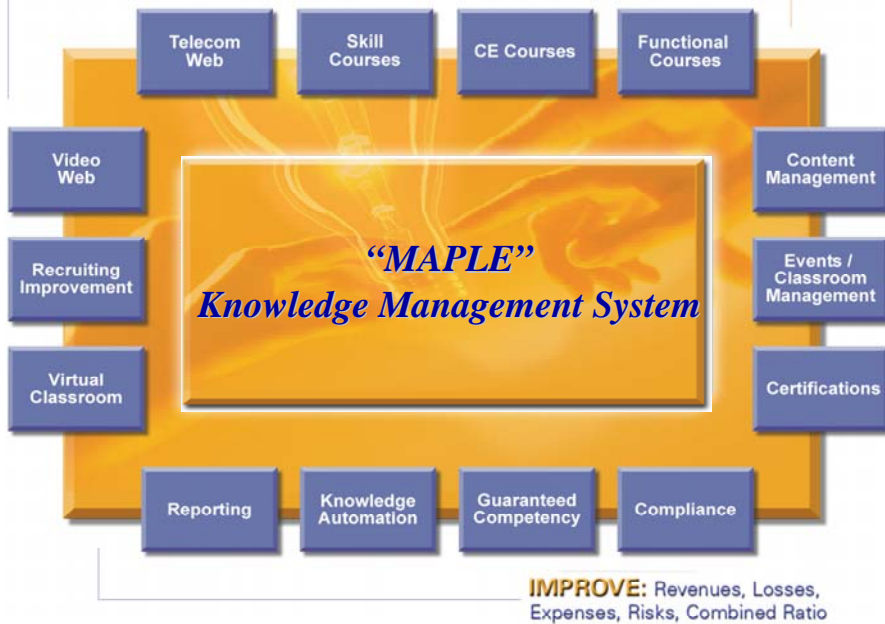
Learn.net’s MAPLE knowledge management solution is fully Rules-based. More information is provided on the following page.

“Multi-Adaptive Performance & Learning Environment”

The **MAPLE** solution is a complete learning and knowledge management system, with many capabilities. Many modules exist, to provide specific needs and benefits.



Learn.net EPI Solutions



Learn.net provides fourteen pre-integrated solutions. Implementations can be phased to meet priorities.

“EPI” stands for both Employee Performance Improvement and Enterprise Performance Improvement.

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