Beyond the SCO:
Modular Courseware from Concept to Business Impact

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Abstract: We are at an incredible time in the learning industry. After decades of talking about modular frameworks and learning content management systems, the global knowledge infrastructure is poised for truly customized, scalable learning. As instructional designers, we need to re-evaluate the concept of modular learning objects; not as full courses, but rather small modules we combine to meet the contextual and consumption needs of the individual, team and organization.

Is your learning content prepackaged and foil wrapped; ready-to-eat, but not very appetizing?

LOs have been around formally since The Learning Technology Standards Committee chose the term "learning objects" in 2000, based on earlier work by Wayne Hodgins' 1994 use of the term in the title of the CedMA working group called "Learning Architectures, API's, and Learning Objects."

The first generation of e-learning platforms provided, in essence, black-box solutions. For the most part, these systems used proprietary formats to manage courses directly. Instructional designers could only deploy content developed for that system.

Do you crank out learning like making sausage, each one the same length and modality regardless of the content?

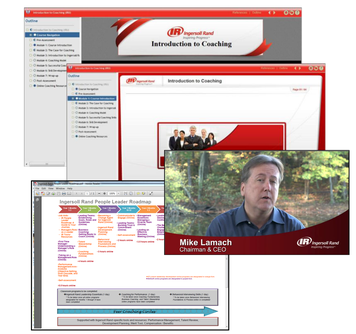
The second generation of e-learning platforms built on their predecessors' successes and "began addressing their failures through the creation of AICC and SCORM. They provided a shift toward modular architectural designs and recognized a need for semantic exchange."

Learning content management systems helped us create content faster and feel modular, like making sausage, but in the end they mostly bundled the learning objects into proprietary sealed packages that lacked unique flavor and were ultimately harder to maintain.

Are your courses one big "dish" to fill your learners up or a collection of bite-sized "nuggets," easy for them to consume and come back for more when they get hungry?

The Tin Can API makes it possible for you to collect data about a wide range of personal experiences. Practically any content of any size from anywhere can be a learning objective and become a part of a person's learning record.

Do you use your Learning Management System as a course deployment tool or a course building and delivery packaging tool? Do you develop course content to fit the tools you have or to fit the needs of the learner?



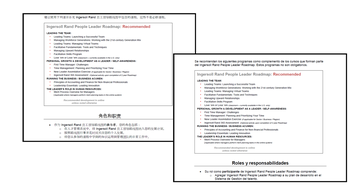
Consider designing courses to:

Use the LMS outline/table of contents to sequence a variety of content objects; allow for different modalities and media types.

Encapsulate each learning objective into a single module; separate modules for "how to navigate the course" and assessment materials.

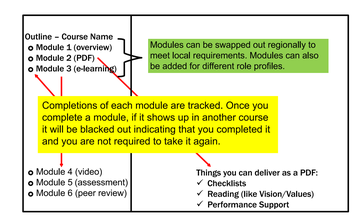
Sequence modules in the LMS; each self-contained with the final set of modules providing synthesis of the others through simulation or problem-based learning.

Create opportunities to modularize globally specific content when and where required.



Reduce maintenance to address specific modules and not the whole course; for example, when products and services change or the learner transitions to a new role.

On the surface this instructional design approach may seem obvious; the real challenge is to help the instructional design team feel comfortable with moving away from a single large Flash course design model. This new mindset may require us to change how we define an SCO.



Does any of this sound familiar?

To improve teaching, behaviorist B.F. Skinner and later Robert Gagne, set their focus on self-paced instruction designed around modules which could be prescribed, customized, and replaced based on the needs of the individual student. This on-demand, self-paced, modular model was found in correspondence courses, self-study programs, even the SRA Reading program in public schools. With the advent of learning management systems, the movement focused on making all courses available as elearning, often turning a two page reading assignment into a twenty slide "page turner."

How do you design for lower costs and create a positive and lasting user experience?

- Deliver the right content in the right context in the right format at the right time
- Only create new content to fill gaps and augment/bridge existing or 3rd party modules
- Support spiral development through phased releases of course modules
- Develop for translation/localization
- Design self contained modules that can be bundled for multiple learning paths,
- Support content sustainability/changes (product lines, regulations, personnel, etc.)
- Encourage direct access to modules for ongoing performance support

Sometimes a "page turner" really is just a page turner.

Additional References