

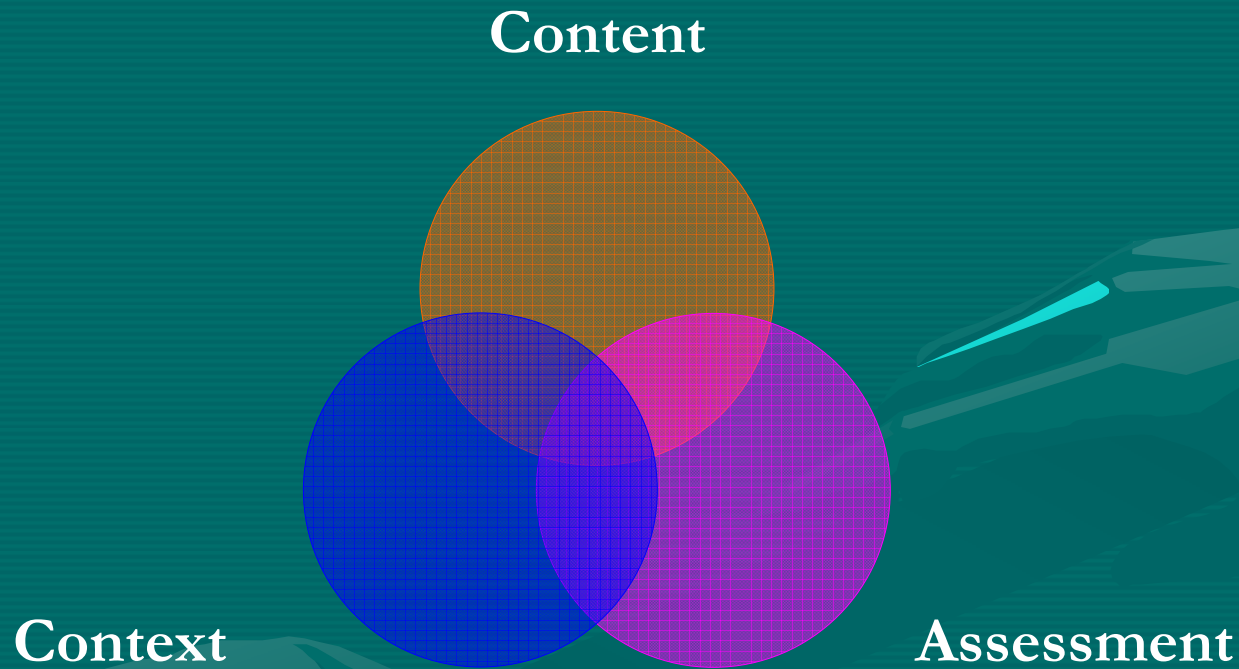


Trends and Issues: The Impact of Learning Objects

By: B. Dianne Calhoun
and Linda Wooten

IT 6750: Current Trends and Issues

Ideal Learning Object Diagram



A Learning Object needs to have enough content and context to stand on its own, but not so much that it cannot be used within another course. Assessments measure the knowledge that learner's have gained from the learning object activity. This diagram shows what we think a standards based learning object might look like.

Created by Dianne Calhoun and Linda Wooten, November 29, 2003.

Introduction

- History
- Definition and Description
 - Video from the University of Calgary that gives a definition of LOs

<http://commons.ucalgary.ca/showcasetv/displayVideo?movieID=1000068&videoID=1000022>

Analysis of Learning Objects (LOs)

- Reasons to have LOs

- Reduce
- Repurpose
- Recycle

Clark and Rossett cited from

(http://www.clomedia.com/content/templates/clo_feature.asp?articleid=24&zoneid=30, 2002)

- Strategies

- Professionals need to change the way they conceptualize and design learning.

Categories of Learning Objects (LOs)

- Fundamental (<http://www.pianolessonsonline.com/Lessons/lesson%204a.htm>)
- Combined-closed (http://www.danmansmusic.com/piano_videos.htm)
- Combined-open (<http://www.dcpiano.com/>)
- Generative-presentation (<http://www.teoria.com/exercises/chords.htm>)
- Generative-instructional (<http://www.funbrain.com/notes/index.html>)

– Categories developed by David Wiley

(<http://reusability.org/read/chapters/wiley.doc>, 2000)

Advantages of Learning Objects (LOs)

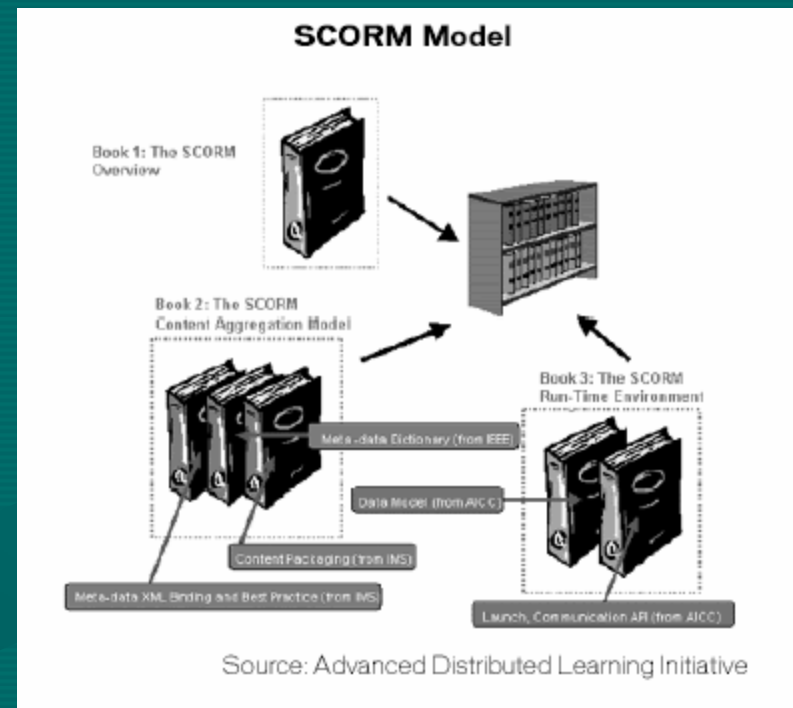
- Flexibility
- Ease of updates, searches, and content management
- Customization
- Interoperability
- Facilitation of competency-based learning
- Increased value of content

Disadvantages of Learning Objects (LOs)

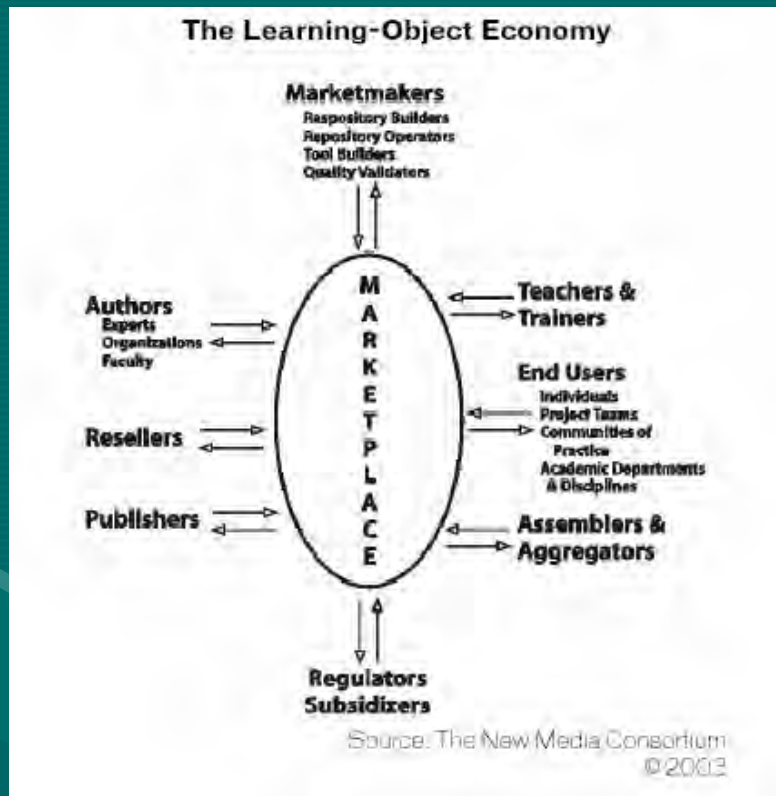
- Confusion around how an LO actually is defined
- Trying to develop standards and specifications for LOs and eLearning that are neutral
- The standards seem to be rigid, military like

Best Practices of Learning Objects (LOs)

- Why do we need standards?
- Some benefits are:
 - Future compatibility
 - Longer lifetime of materials
 - Easier locate, access, archive, and reuse – metadata (example found at http://vcampus.uom.ac.mu/lor/display_lo.php?menu=1&loref=147)
- Organizations
 - **IEEE (LTSC)**
 - SCORM
 - IMS
 - PROMETEUS
- SCORM Course - <http://www.jcasolutions.com/SC12/home.html>



Implementation of Learning Objects (LOs)



- Learning Object Exchanges:
 - Proprietary
 - Commercial
 - Free
 - Shared
 - Peer-to-peer (Software application for peer-to-peer networking at <http://www.etrafficsolutions.com/products/izooloo/>)
- Information websites that give various places to find LOs at http://learnware.uwaterloo.ca/projects/CCCO/cloe_about_find.html and <http://elearning.utsa.edu/guides/LO-repositories.htm>.
- Developed by Laurence Johnson (http://download.macromedia.com/pub/solutions/downloads/elearning/elusive_vision.pdf, 2003)

Future of Learning Objects (LOs)

- XML-related technology and standards
- Tools are easier to use
- Tool prices are more competitive
- Indexing LOs
- Topic maps
 - Quoted by Steven Shaw
(http://www.aace.org/dl/files/ELEARN2002/paper_3009_3403.pdf, 2002)

Systemic Impact

- Cisco's Chuck Barritt said that learning objects “result in shortened development time when updating existing objects or modifying them for a new audience” and “give the ability to deliver dynamic, prescriptive learning.”
- Joe Jurzyeck of LOBJ.org as saying “the primary benefit coming from different instructors using the same materials in several contexts.”
 - Clark and Rossett quote the above people (http://www.clomedia.com/content/templates/clo_feature.asp?articleid=24&zoneid=30, 2002)

Implications of Professional Practice

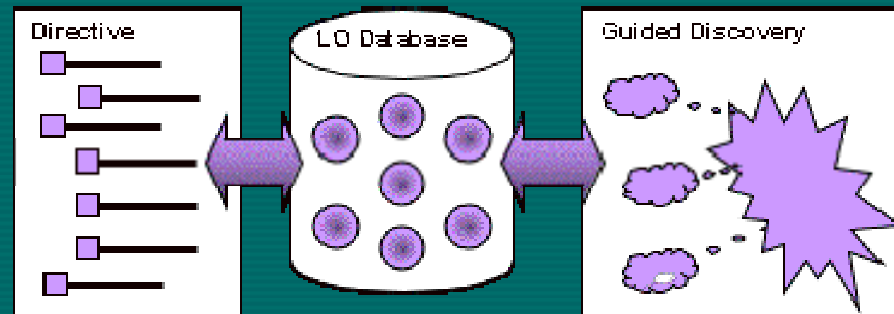


Figure 3: Common Database for all Architectures

- Receptive
- Directive
- Guided Discovery
- Exploratory

Conclusion

- LOs are hard to define
- Standards are not being strictly followed
- Practitioners and technology specialist need to collaborate
- Constructing a personalized learning program

Activity

- Show stand alone LOs from -
<http://www.learnactivity.com/html/rlo.htm> and
<http://www.alivetek.com/learningobjects/>
- Interactive activity – Exploring Adaptive Learning Objects: A Prototype -
<http://www.designbydi.com/UCD/LO/index.cfm>



Questions?

- Any Questions?
- Full list of resources in the paper at <http://www.designbydi.com/UCD/LO/references.cfm?fuseaction=references>
- Additional resources listed in Appendix A at <http://www.designbydi.com/UCD/LO/appendices.cfm?fuseaction=appendices>