

Learning Objects and Metadata

Ruben R. Puentedura, Ph.D.

What Is a Learning Object?

- A *core* defined by a *content object*
 - e.g., an image, a video fragment, or a simulation
- A *wrapper* that contains *pedagogical information*
 - e.g., how and why you would use this
- *Metadata* for finding and structuring this information

Why Use Learning Objects?

- To encourage teachers, students to act as active producers, rather than passive consumers
- To provide a basis for grounded pedagogical discussion and development
- To allow for flexibility in curriculum and learning styles without sacrificing content
- To build a community of learners

What Are Some Essential Properties of Learning Objects?

- They must be *modular*
- They must be *repurposable* and *recontextualizable*
- They must be *metadata* compatible

Why Is Metadata Needed?

- To *locate* learning objects
- To *structure* their use
- To *share* them
- To *evaluate* them

Why Have Metadata Initiatives Failed? (I)

- Confusion between formal classification methodologies and metadata itself:
 - Dublin Core, SCORM are ways to standardize metadata classification and exchange, but not metadata creation
 - Solution: the classification methodology should be transparent to most users

Why Have Metadata Initiatives Failed? (II)

- Confusion between the way metadata is stored and metadata itself:
 - XML is a tool for creating infrastructure, not content
 - Solution: users should not have to worry about writing XML code

Why Have Metadata Initiatives Failed? (III)

- Nobody ever told users *why* metadata is important

How Should We Create Metadata? (I)

- Allow users to “tell stories”
- Example: Maricopa Learning Exchange
<http://www.mcli.dist.maricopa.edu/mlx/index.php>

title

What should we label this package?

summary

Describe your package in 50 words or less. This is what MLX visitors will read when your package is listed.

details

Now, you can add a few paragraphs containing a description of the package, including why it was created, outcomes on its use, etc.

categories

With which of the following categories is this package associated?

- Learning Objects
- Learning Activities
- Unique Web Sites

- Special Projects
- New Technologies

discipline(s)

What academic subject areas use this package? Separate your list with commas.
(i.e. Geology, Architecture, Computer Science)

Save

and

continue (next: Package credits)

exit

How Should We Create Metadata? (II)

- Provide “pre-formatted” categories
- Example: MERLOT
<http://www.merlot.org>

[Description:](#)

[Photo URL:](#)

*** [Type of Material:](#)** Animation

- [Primary Audience:](#)
- Grade School
 - Middle School
 - High School
 - College
 - Graduate School
 - Professional

Subject Category(ies)

*** [Subject Category:](#)** History

Sub - Category:

- Select ----
- Topical
- Political
- Rural
- Slavery
- Public History
- Science, Medicine, and Technology
- Social
- Class
- Gender
- Labour
- Local and Regional
- Popular Culture
- Race and Ethnicity

ries:

list above and click the delete button.

[Subject Category](#) | [View Subject Index](#)

How Should We Create Metadata? (III)

- Allow for automatic classification schemes
 - Example: Grokker
<http://www.grokker.com>
 - Note: this approach has not been used (yet) in any learning object repositories



Sustainable Forestry



Forestry And LoggingHistory of Logging ...



Living



Logging Community i...



Logging Equipment



Maine Forest And Lo...



Maine Loggers



Mills



Museum



Professional Logging



Featured Documents



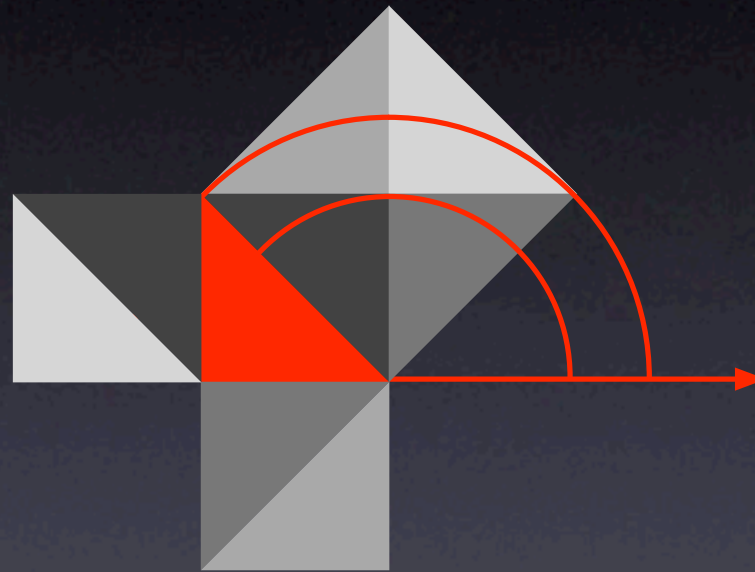
More Categories

maine logging

Which Method Works Best?

- Use a combination of all three
- Consider expanding metadata by incorporating:
 - User-generated metadata
 - Community-generated metadata

Hippasus



- <http://www.hippasus.com>
- rubenrp@hippasus.com