

Pathways Call  
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# LAR (Learning App Readiness): Examples

# LAR Definition

- Refers to how educational resources, collections, and their related metadata are aligned to educational goals, curriculum, or professional development needs of users
- AND
- how readily said resources and collections can be embedded in tools and services that educators and students use.

# LAR Guiding Principles: *Resources*

- **21st century contexts:** advance critical thinking, problem solving, collaboration & recognize the interdisciplinary nature of knowledge
- **Relevant and reliable for STEM education:** authored, meet pedagogical needs of educators and interests of learners
- **Accessible:** rights, licenses, permissions, & technical requirements clearly stated
- **NSDL policy:** Meet *Resource Quality Guidelines*

# LAR Guiding Principles: *Metadata*

- **Complete:** title, description, URL, educational level, resource type, audience, language, rights, access rights, creation date, contributors/creators, language, mime type and, if appropriate, educational standards
- **Concise:** free of self-promotion; describes purpose and content of resource for comprehension
- **Accurate:** the metadata is correct content for the field

# LAR & NSDL Scope/Collections

- NSDL has collections that are library appropriate but LAR concepts may not be applicable
  - reference collections
  - dataset collections
- Collection sustainability/maintenance is important in maintaining LAR
- Not always easy to determine LAR

# Using LAR Resources

- Done programmatically by learning applications
- Current learning applications are filtering by:
  - education level
  - resource type
  - subject
  - audience
  - educational standards

*For NSDL currently, human-crafted metadata (resource, annotations & usage data) exceeds machine-created metadata in terms of accuracy and quality.*

# Problem Resources & Metadata: Collection A

## RESOURCES CONSIST OF:

- *Standards documents* from the early 2000's that are out of date or broken and not reachable
- *Reports* that have been superseded by more recent reports on education issues
- *Good sounding career information* but broken URLs
- *Not really learning resources* but career info is valuable if links are updated

## METADATA IS MISSING:

- Education level
- Resource type
- Access rights
- Rights
- Mime type
- Creation date

# Good Resources - Metadata Needs Help: Collection B

## RESOURCES CONSIST OF:

- Web-based *curriculum supplements* for teaching the 2nd semester of general chemistry
- Freely available
- Textual *tutorials* with explanatory *images/diagrams*

## METADATA IS MISSING:

- Has education level but it is in audience
- Has resource type (Text). Should include tutorial, instructional & reference material
- Audience
- Access rights
- Creation date



# Good Metadata – Resources Need Help: Collection C

## RESOURCES CONSIST OF:

- Has good resources also cataloged in other collections
- These include: *instructional materials, lesson plans*
- **But:**
- Overwhelmed by the number of broken URLs
- Too many *departmental websites* and *landing pages in research journals*

## METADATA HAS:

- Education level
- Language
- Creator/publisher
- Mime type
- Resource type
- Rights
- Title/URL
- Description/keywords
- Creation date (sometimes)
- Missing access rights (has cost instead)
- Missing audience

# Good Resources & Metadata: Collection D

## RESOURCES CONSIST OF:

- *Interactive resources* for teaching psychology
- Peer-reviewed materials
- *Studies, data sets, experiments, demonstrations*
- Teaching aid and instructor support

## METADATA HAS:

- Education level
- Language
- Creator/publisher
- Mime type
- Resource type
- Rights
- Title/URL
- Description and keywords
- Missing audience
- Missing creation date
- Missing access rights

# LAR or Not?

## RESOURCE QUESTIONS:

- What are the resources?
- What would be the perceived use of the materials?
- Are the resources learning materials?
- Are the materials only useful in an educational setting?

## METADATA QUESTIONS:

- What information is provided by the metadata?
- Are the metadata detailed and appropriate for educational use of the resource.
- Are metadata fields used correctly?
- Can the metadata be used effectively & programmatically by learning applications?

# Compare Your Collection

- See metadata assessment of your collection:  
<http://www.dls.ucar.edu/people/kginger/assessment/reports/>
- How does your collection compare with the previous examples?

# LAR Workshop

- Will hold a LAR workshop to flesh out these ideas and help NSDL move forward on these concepts
- Want to learn how other groups are working with such ideas
- Service providers & end users want resources that adhere to LAR principles