Beyond NSDL_DC:
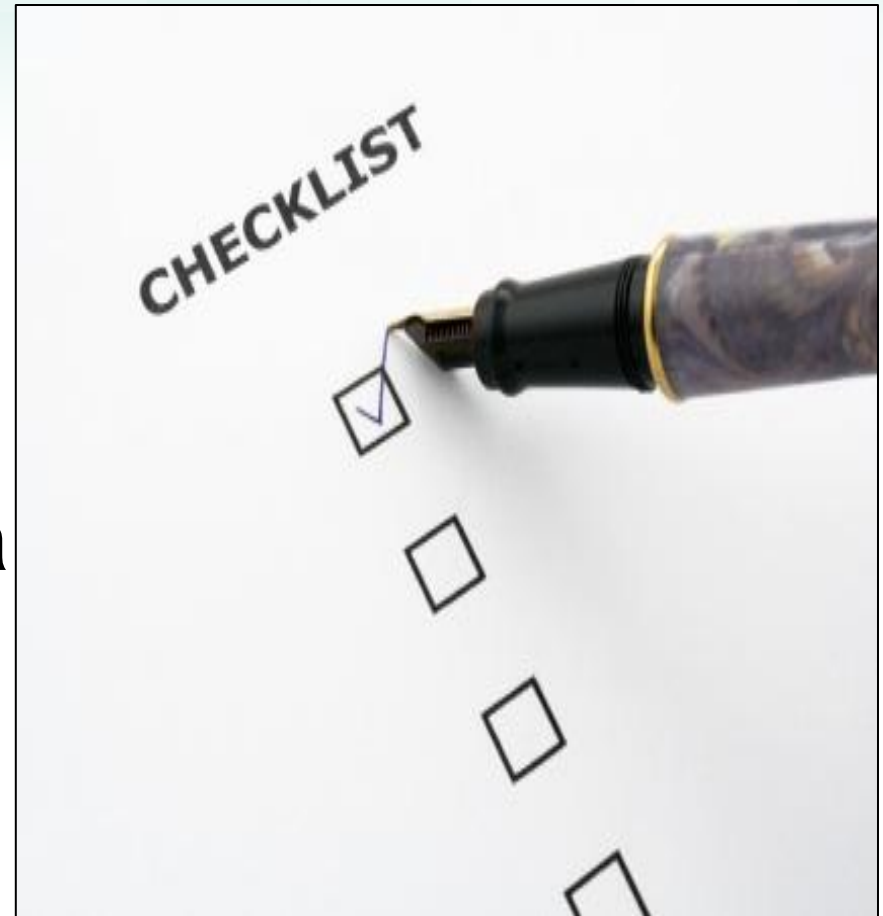# How to Contribute Native and Annotation Metadata

NSDL
THE NATIONAL SCIENCE DIGITAL LIBRARY

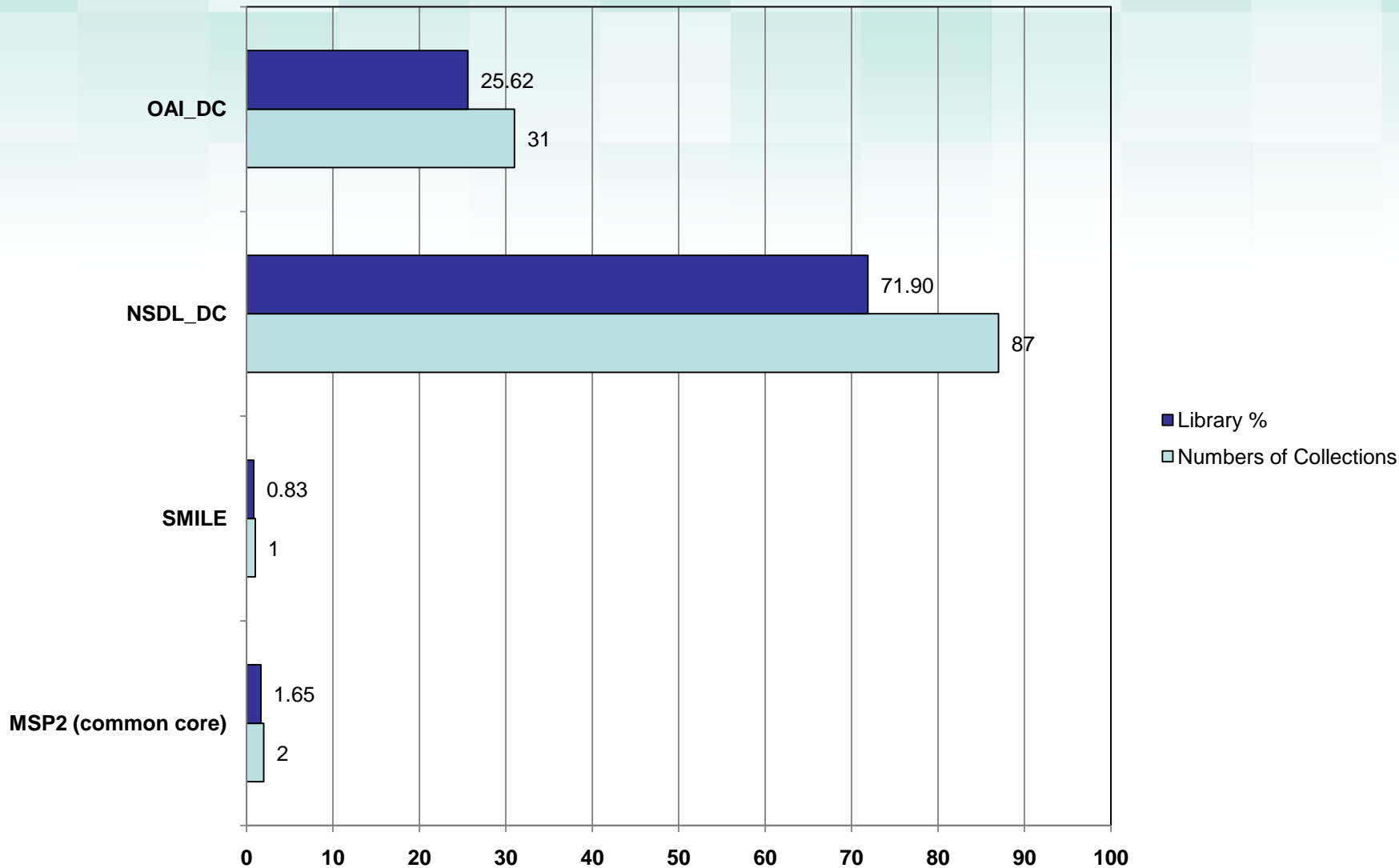# 2010 Annual Meeting

Presentation Contents

- Current metadata

- Native metadata

- Annotation metadata (includes paradata)

- Using native metadata

- Interface examples

Current Resource Metadata Accepted

- **_NSDL_DC_**: has educational metadata; some controlled vocabulary support, but does not say how data should be entered (e.g. *Jane Doe* or *Doe, Jane*)

- **_OAI_DC_**: 10 fields of title, description, subject, creator, contributor, publisher, date, type, source, rights (no educational metadata)

NSDL Native Metadata Format

OAI_DC
- 25.62
- 31

NSDL_DC
- 71.90
- 87

SMILE
- 0.83
- 1

MSP2 (common core)
- 1.65
- 2

Legend:
- ■ Library %
- □ Numbers of Collections

X-axis: 0 10 20 30 40 50 60 70 80 90 100

Help to Sustain NSDL in Future

- Allow other metadata formats to be ingested

- Other formats may be:

  - more descriptive

  - audience-specific

  - richer than NSDL_DC

- Provide greater resource context

  - ratings, teaching tips,

  - educational standards

Tools to Contribute Metadata

- ***OAI***: protocol to share metadata records

- ***WFI*** (Web Feed Ingest): indicate RSS feeds for an existing collection in NSDL

- ***NCS*** (NSDL Collection System): catalog directly into NSDL

- ***CWIS*** (Collection Workflow Integration Sys): catalog any format; share with NSDL; & create a web portal

Contribute Native Resource Metadata

- Use NSDL standardized vocabs or provide mapping to them (resource type, education level, audience, language, access rights)

- Also include: title, description, rights, creator, mime type, educational stds, or relations

- Indicate the XPATH to the XML element that has the resource URL

- Indicate the name of the metadata format

NSDL

What is Anno Metadata & Paradata?

- ***Annotation:*** user comments, star ratings for edu. resources

- ***Paradata*** summary data about resource use (e.g. average star rating, # of visits)
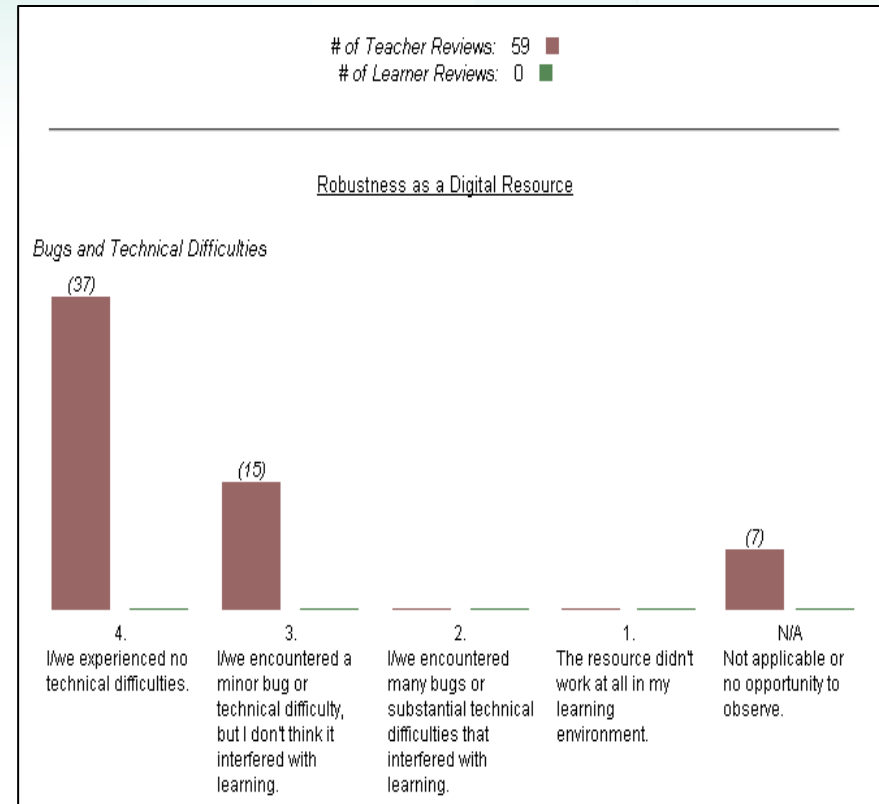
Why Paradata

- Allow users to see context in which resources are being used by members of the community

- Allows automatic means for:
  - improving search results
  - displaying resources by use categories (e.g. most visited, average star rating, summaries of contexts of use – used for learning goal X)

NSDL

Contribute Anno Metadata & Peradata

- ## Use NSDL community anno format (comm_anno)
  - Indicate 'annotated' resource by metadata handle or URL
  - Include creator information and the annotation content

- ## Use own metadata format
  - Indicate 'annotated' resource by metadata handle or URL
  - Indicate the XPATH to metadata handle or URL
  - Indicate the name of the metadata format
  - Include creator information and the annotation content

Using Native Resource Metadata

- NSDL.org operates on canonical NSDL_DC.
  - Native format transformed to NSDL_DC
  - Resources then become available at NSDL.org
  - TNS can assist with transform
- Community can use native formats directly through service endpoints (transform to NSDL_DC not necessary)
  - NSDL Search Service for custom views
  - NSDL OAI data provider
  - Contextualized learning applications like CCS

Using Annotation Metadata

- NSDL.org will operate on canonical COMM_ANNO format
    - Native format transformed to COMM_ANNO
    - Annotations then become available at NSDL.org
    - TNS can assist with transform
    - Exploring ways to display annotation metadata at NSDL.org
- Community can use native formats directly through service endpoints (transform to COMM_ANNO not necessary)
    - NSDL Search Service for custom views
    - NSDL OAI data provider
    - Contextualized learning applications like CCS

NSDL

Using Paradata

- NSDL STEM Exchange pilot program is underway
  - Working group is developing a paradata format
  - UI Demonstration soon
- Using established tools/methods to share, manage & distribute (OAI, WFI, NCS)
- Community can access & use paradata in their portals and learning applications

comPADRE
Physics and Astronomy Education Communities

Explore the Collections | **Events** | **Partners** | **People** | **Collaborate** | **Community Services** | **Contact Us** | **About ComPAD**

home » *Website Detail Page*

Detail Page

PhET Simulation: Projectile Motion

published by the Physics Education Technology Project

This webpage contains a simulation that allows the user to fire various objects out of a cannon. By manipulating angle, initial speed, mass, and air resistance, concepts of projectile motion are illustrated. This page also contains user-submitted suggestions of ideas and activities for this simulation.

This item is part of a larger collection of simulations developed by the Physics Education Technology project (PhET). The simulations are animated, interactive, and game-like environments in which students learn through exploration. All of the simulations are freely available from the PhET web site for incorporation into classes.

http://phet.colorado.edu/en/simulation/projectile-motion

Resource Metadata

Subjects	Levels	Resource Types

Classical Mechanics
  - Applications of Newton's Laws
  - Motion in Two Dimensions
    = Projectile Motion
	- Lower Undergraduate
	- High School
	- Middle School
		- Instructional Material
		  = Activity
		  = Interactive Simulation

Intended Users	Formats	Ratings
- Learners - Educators	- application/flash	★★★★☆ Rated **4.5 stars** by 2 people Want to rate this material? Login here!

Paradata

Item Details | **Related (1)** | **Comments (1)** | **Cite**

Annotation

Useful

Author: Jennifer Broekman
Posted: January 20, 2008 at 1:44PM
Source: The Physics Front collection

But perhaps more useful if there were a numerical way to edit the firing angle.

STEM Exchange Summary

This box summarizes some of the activies surrounding this resource.

Paradata

Viewed: 10
Favorited: 4
Embedded: 4
Rated: 9
Average Rating: 8.6 out of 10

Conversation Stats

Comments on other sites: 0
Reddit Comments: 0
Digg Comments: 0
FriendFeed Comments: 0
Tweets: 2

Tags

ancient ancient-civilizations
ancient-egypt archaeology architecture biblical
docs egypt egyptian egyptology
factor geometry giza history model
monuments nova pbs pyramid
pyramids scale scale_mapping
science solid thinkfinity tv

Notes

- learn from pbs nova about the construction of the pyramids with a click through map and build... ;)
- maybe for introductory lesson, for differentiating
- measurements of the pyramids
- scale model of a pyramid

PBS HOME PROGRAMS A-Z TV SCHEDULES WATCH VIDEO SUPPORT PBS SHOP PBS

Pyramids Home

Pyramids   Excavation   Table of Contents   Mail   Support

NOVA ONLINE ADVENTURE

Pyramids

Scaling the Pyramids

So what's so great about the Great Pyramid? Lots of stuff, like its amazing shape and dimensions. Click on the pyramid to find out more.

NOVA Home
PBS Home

height

blocks

Scaling the Pyramids
http://www.pbs.org/wgbh/nova/pyramid/geometry/index.html
This web page features activities that compare the Great Pyramid to such modern structures as the Statue of Liberty and the Eiffel Tower. In the first activity, students use a template to construct a scale model of the Great Pyramid. They must find the scale heights for the tallest building in their neighborhood or for their height. In the remaining activity, students are given the dimensions for two other pyramids and challenged to create models.
Grade Level: Middle school, grade 7
Audience: Learner
Subject: Geometry, plane geometry, pyramids, scale, solid geometry
Resource Type: Activity, instructional material, lesson/lesson plan
Educational Standards: Show Standards

Resource Metadata

Found in Collection(s)

NSDL Math Common Core
http://nsdl.org/browse/commcore/math/
The NSDL Math Common Core collection provides quick and easy access to high-quality math resources that have been related to one or more standard statements within the Math Common Core. These resources are selected from the larger NSDL collection and other trusted providers, and organized by grade level and domain area.

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