Data Curation Practices in Institutional Repositories: An Exploratory Study

Abstract

This poster reports on the preliminary findings of a study that examines data curation work in institutional repositories (IR). The study identified three perceived roles played by IR staff (i.e., data curator, IR manager, and metadata specialist) and role-specific sets of activities and skills. The findings of this study can inform the development of best practices and effective infrastructure support for data curation in the context of IRs, as well as teaching data curation in LIS schools.

Research Questions

- What are the typical data curation-related activities and contexts in IRs?
- How does IR staff perceive their role-related activities and skills?
- What user services do IRs currently support?

Methodology

The study used Activity Theory (Engestrom, 1987; Leontiev, 1978) to guide the design of a protocol for semi-structured interviews. Activity Theory suggests general activity structure and context relationships of data curation in IRs.

This poster reports on data collected from five participants from five different universities in the US. The selection of participants was guided by two criteria. To be eligible for participation in the study, participants had to work for IRs that stored and curated research data objects and had to be operated by AAU member universities.

Discussion

Data Curation Activities and Contexts

Activities:					
•Conceptualize data with data providers	•Receive data and create metadata	•Evaluate data for preservation	•Ingest and store data to repository	•Publish data	•Ensure that data is accessible and reusable
Tools:					
•Software (e.g., word, excel, powerpoint, photoshop, video compression tool, image viewer)					
•Internet web application (e.g., email, Altmetrics, file recommendataion/identification tool, EZID service, Google Refine and Drive)					
•Metadata schemas (e.g., Dublin Core, Premis, DataCite, MODS, METS, MIX)					
•Identifier schemas (e.g., DOI, Handle, ARK)					
•Repository software (e.g., DSpace, bepress Digital Commons, HUBzero, Hydra)					
•High capacity storage					
•Workflow add-on to IR system					
Norms and Rules:					
•For deposit, content, digital preservation, copyright, collection, support, access, and use					
Division of Labor:					
IR manager, curator, metadata specialist, data provider					

IR Staff’s Role-Related Activities and Skills

	Data Curators	IR Managers	Metadata Specialists
Activities	<ul style="list-style-type: none">• Build or plan data governance structures• Consult with data providers and connect them to metadata specialists or IR managers	<ul style="list-style-type: none">• Manage IRs on a daily basis• Work with data providers to help add metadata and upload data into IRs	<ul style="list-style-type: none">• Help data providers to create appropriate metadata for their dataset
	<ul style="list-style-type: none">• Outreach and educate campus community		
Skills	<ul style="list-style-type: none">• Familiarity with research data (e.g., ability to handle data complexity and diversity)	<ul style="list-style-type: none">• Technical skills (e.g., knowledge of digital library architecture and software)	<ul style="list-style-type: none">• Metadata knowledge
	<ul style="list-style-type: none">• Ability to communicate well with other people and to work in a team• Time management		

IR User Activities and Services

IR User Activities	User Services
<ul style="list-style-type: none">• Searching• Browsing• Social networking/Sharing/Tagging• Citing• Storing• Downloading	<ul style="list-style-type: none">• Providing options of using a license• Providing usage statistics services• Running data curation workflow wizard• Supporting project management functions

Next Steps

Studying data curation work in IRs, identifying different roles played by IR staff and role-specific needs for skills, can inform the development of best practices, infrastructure configuration templates, as well as the teaching of data curation in LIS schools. The future research related to this one will explore metadata needs and practices, particularly identifier needs and uses in the context of data curation in IRs.

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