Choosing a Framework for Assessing Research Data Services and Training

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Road Map

Our Project
Frameworks
What We Did
Charting a Course
POLL: Where Are You With RDM?

- Just Getting Started
- Have a Guide or Similar
- Have a Specialist or a Team
- Have a Robust, Active Program

#CHS15RDMAudit
Research Data Management @NCSU

Data Management Planning

- Data Management Planning for Researchers
  - What is a Data Management Plan (DMP)?
  - How do you write a DMP?
  - Who can you contact if you need help or have questions?

- Specific guidelines for data management planning from NSF, NIH, DFG, NARS, DFG

Practically Speaking

Using a Data Management Plan Review Service as a Training Ground for Librarians

Authors: Mary-Erin Davis, William Cross

Abstract

INTRODUCTION: Research Data Management (RDM) offers opportunities and challenges that the Information Library support and researcher needs. Libraries are in a position to provide guidance at the point of need while also implementing training for subject librarians. Librarians in the practical issues and realities facing researchers and their initiatives. DESCRIPTION OF PROGRAMS: Service: The North Carolina State University (NCSU) Libraries has deployed a Data Management Plan (DMP) Review service managed by a committee of librarians with diverse experience in data management and domain expertise. By creating library services to participate in the DMP review process, our training ground model aims to develop needed competencies and support researchers through relevant services and partnerships.

DOI: http://doi.org/10.7710/2162-3309.1243

Charleston Conference

Building Capacity in Your Library for Research Data Management Support (Or What We Learned From Offering to Review DMPs)

Authors: William Davis, NCSU Libraries

Abstract

In an ongoing efforts to build infrastructure and support among research data management needs, we found training in selecting a data management plan reviewer the service in training we have found that it's possible to build a team that can engage in and deliver research data management planning. By involving different perspectives and experiences, our committee has been able to leverage the expertise and attention to detail required for effective data management planning. As a result, we have been able to provide valuable feedback to researchers at all stages of their projects. The service has been well-received and has helped researchers to better understand the complexities of data management planning.

DOI: 10.5703/1288284315632

https://www.lib.ncsu.edu/guides/datamanagement

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Frameworks to Audit

- Externally-Facing Services
- Existing Skillsets
- Capacity to Meet Needs
Framework 1


- Providing access to data
- Advocacy and support for managing data
- Managing data collections
Framework 2


Data Literacy

data sharing, open access, data services, "data interview", data life cycle, IP and copyright, compliant with mandates, data literacy, data management plan, access or locate data sets, data security

Technical Competencies

web 2.0 technologies, data archiving, manage and curate data, metadata standards, digital databases, IR, data mining and visualization, digital lab notebook applications
Framework 3
“Data management as A Research Tool (DART)”

• Rubric based on review of DMPs – skills rated “high” “low” or “no”

• Data type, data capture, volume, sharing

• More complete info in Whitmire’s DLF2015 presentation
Other Frameworks


• Zilinski, L. D., Chan-Park, C., Dasler, R., & Nicholls, N. (2013). Carpe data: Data curation services at four different institutions. *Presented at the 2013 DLF Forum, Austin, TX.*
POLL: What Framework(s) Do You Use?

- Joint Task Force
- Needed Competencies
- DART
- Other

#CHS15RDMMAudit
Case Study: Audit of Training Ground Model
Committee as Hub of RDM Support

RDM support at point of need

Training for librarians + researchers

Promotion + marketing
Training Ground Model

- DMP Review Service provides hands-on experience
- Team dynamic delivers in situ peer-to-peer training
Audit of Training Ground Model

Joint Task Force (2014) Competencies as a framework to audit:

• Capacity of our model to develop competencies for librarians
• Capacity of our model to support researchers

Providing access to data
Advocacy and support for managing data
Managing data collections
<table>
<thead>
<tr>
<th>Core competencies</th>
<th>Relevant experience gained through Training Ground model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying datasets, discovery tools</td>
<td>Re3data.org and Data Citation Index to identify datasets and repositories for data deposit</td>
</tr>
<tr>
<td>Data centers, repositories and collections</td>
<td>Mediate with data repositories for eligibility and criteria for data deposit; how data is organized in repositories; emerging standards for data citation</td>
</tr>
<tr>
<td>Data organization and structure within these collections</td>
<td></td>
</tr>
<tr>
<td>Data citation/referencing</td>
<td></td>
</tr>
<tr>
<td>Data licensing and intellectual property policies and principles</td>
<td>Licensing language and terms for external datasets; knowledge of licensing options to support sharing and reuse of data</td>
</tr>
<tr>
<td>Data manipulation/analysis techniques and tools</td>
<td>Expertise limited to a few librarians with specific geospatial and data analysis skills</td>
</tr>
</tbody>
</table>
Advocacy and support for managing data (1)

<table>
<thead>
<tr>
<th>Core competencies</th>
<th>Relevant experience gained through Training Ground model</th>
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</thead>
<tbody>
<tr>
<td>Funders’ policies and requirements</td>
<td>Wide range of funding agency requirements for DMPs</td>
</tr>
<tr>
<td>Data management plans</td>
<td>Understanding main elements of DMPs; exposure to successful &amp; unsuccessful examples across multiple disciplines;</td>
</tr>
<tr>
<td>Research practices and workflows</td>
<td>Awareness of researchers’ practices and literacy regarding best practices for managing data</td>
</tr>
<tr>
<td>Data centers, repositories and collections for deposit</td>
<td>Identify eligibility for data deposit; investigate how data is organized in repositories; exposure to emerging standards for data citation</td>
</tr>
<tr>
<td>Core Competencies</td>
<td>Relevant experience gained through Training Ground model</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Articulate benefits of data sharing and re-use</td>
<td>Ways to help researchers effectively share data and publications while maximizing intellectual property rights</td>
</tr>
<tr>
<td>Data sharing options, open access, IPR, licenses</td>
<td>Practices spanning use of commercial grade cloud storage to storage on local media; benefits that established repositories provide (e.g., persistent identifiers, protection of sensitive data, citation tracking, preservation services)</td>
</tr>
<tr>
<td>Disciplinary norms and standards for data management</td>
<td></td>
</tr>
<tr>
<td>Data structures, types and formats</td>
<td>Ways to standardize file-naming, migrate to non-proprietary file formats, document and describe data structure through metadata</td>
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</tbody>
</table>
## Advocacy and support for managing data (3)

<table>
<thead>
<tr>
<th>Core Competencies</th>
<th>Relevant experience gained through Training Ground model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best practices for managing data, standards, metadata and vocabularies</td>
<td>Variation in metadata standards; in cases where standards do not exist, offer to assist in creating standard practice for research projects</td>
</tr>
<tr>
<td>Data publication requirements of specific journals</td>
<td>Data sharing expectations of journals that require data publication; terms in publishers’ author agreements that may limit researchers’ ability to meet sharing funders’ public access mandates</td>
</tr>
<tr>
<td>Data audit (i.e., identify range of datasets on campus) and assessment tools (e.g., Data Curation Profiles)</td>
<td>Limited experience in identifying datasets on campus and in employing assessment tools</td>
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</tbody>
</table>
## Managing data collections

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<th>Core Competencies</th>
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</thead>
<tbody>
<tr>
<td>Metadata standards and schemas, data formats, domain ontologies, data citation, data licensing; identifiers</td>
<td>Variation in metadata standards; offer to create metadata schema; standards for data citation; licensing options to support sharing &amp; reuse of data; document &amp; author identifiers</td>
</tr>
<tr>
<td>Selection &amp; appraisal tech for datasets</td>
<td>Limited experience due to lack of campus data repository</td>
</tr>
<tr>
<td>Discovery tools</td>
<td>Some experience in these areas when providing support for researchers in identifying disciplinary or generic data repositories for data deposit; expertise in a few librarians who manage locally curated special collections and university archives</td>
</tr>
<tr>
<td>Database design types and structures</td>
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<tr>
<td>Data linking and data integration techniques</td>
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<td>Data storage infrastructures</td>
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<td>Digital preservation metadata</td>
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<td>Forensic procedures in digital curation</td>
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What’s Working

Supporting NCSU Researchers in Managing Their Data

Supporting NCSU Researchers in Achieving NIH Public Access
What’s Next @ NCSU

• Community of practice for Data Science + Viz

• Double-back and cover the bases

• Look outward for unique skills + knowledge

• Go beyond DMPs → Become research partners
What’s Next for You?
#CHS15RDMAudit
http://go.ncsu.edu/chsc

onf15rdmaudit

QUESTIONS ANSWERS