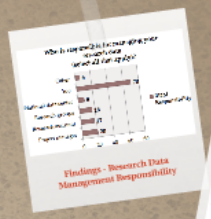

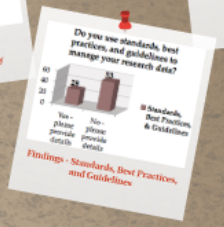

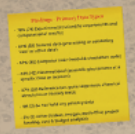

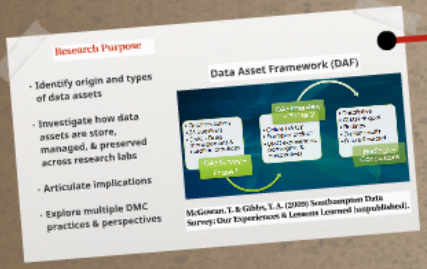

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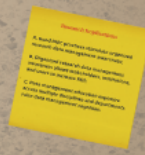
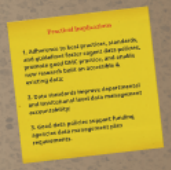
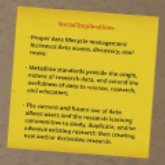






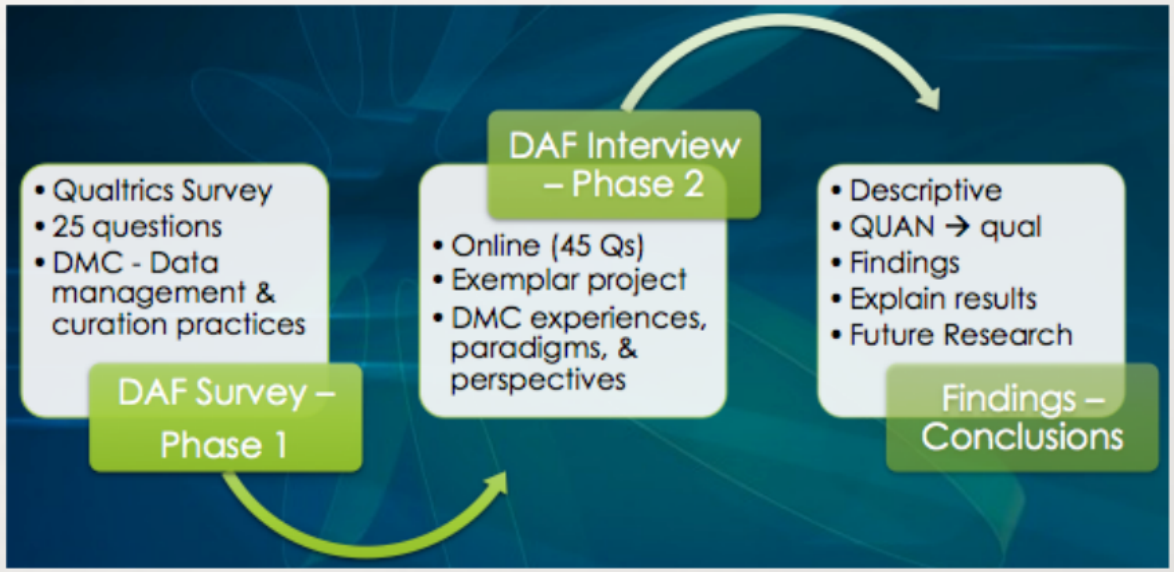
Exploring the Data Management and Curation Practices of Scientists in Research Labs within a Research University via an Adapted Data Asset Framework (DAF) Survey – Phase 1

Plato L. Smith II, Doctoral Candidate, Florida State University - School of Information
International Association of Social Science Information Services & Technology Presentation
Toronto, Canada - June 4, 2014

Research Purpose

- Identify origin and types of data assets
- Investigate how data assets are store, managed, & preserved across research labs
- Articulate implications
- Explore multiple DMC practices & perspectives

Data Asset Framework (DAF)



McGowan, T. & Gibbs, T. A. (2009) Southampton Data Survey: Our Experiences & Lessons Learned [unpublished].

Research Labs

1. Center for Advanced Power Systems
2. Antarctic Marine Geology Research Facility
3. Center for Ocean-Atmospheric Predication Studies
4. Geophysical Fluid Dynamics
5. Marine and Coastal Laboratory
6. National High Magnetic Field Laboratory (NHMFL)
7. National Science Foundation (NSF) EarthCube

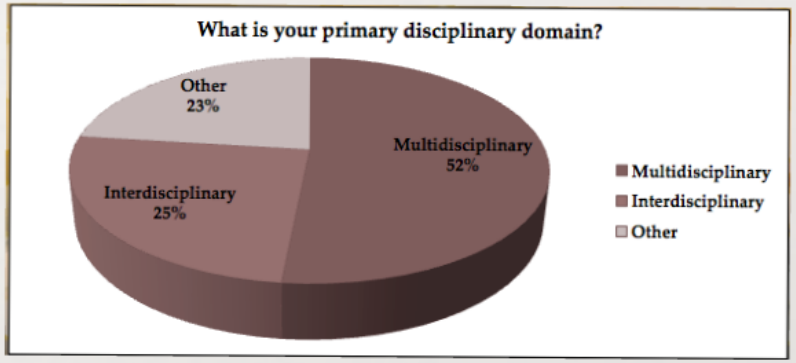
Role	Frequency	Percent	*Other
Senior Researcher	23	23%	IT Support
Principal Investigator	29	29%	Postdoctoral research associate
Research Assistant	26	26%	Research associate
Research Technician	3	3%	Operation project manager
Research Support	3	3%	Data management
Research Student	10	10%	Postdoctoral research associate
*Other	7	7%	Postdoc
Total	**101**	**1.01**	

Research Design & Methodology

- Sequential Mixed-Methods Explanatory Research Design (Creswell & Plano Clark, 2011)
- Quantitative/qualitative DAF survey
- Qualitative semi-structured DAF interview
- Metatriangulation (Lewis & Grimes, 1999)
- Adapted Conceptual Framework (Burrell & Morgan, 1979; Morgan & Smircich, 1980; Morgan, 1983; Solem 1993; Smith II, 2013)
- Three Perspectives (Martin, 1992)

Findings

DAF	Surveys	Interviews
Starts	129	7
Completes	107	6
Completion Rate	83%	86%



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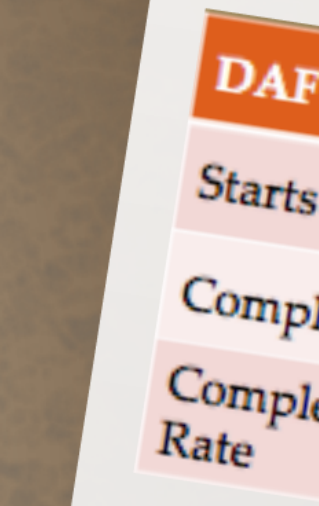

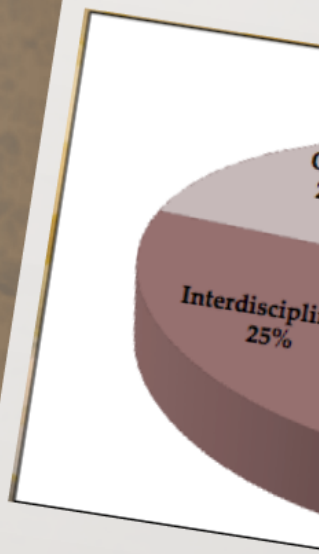

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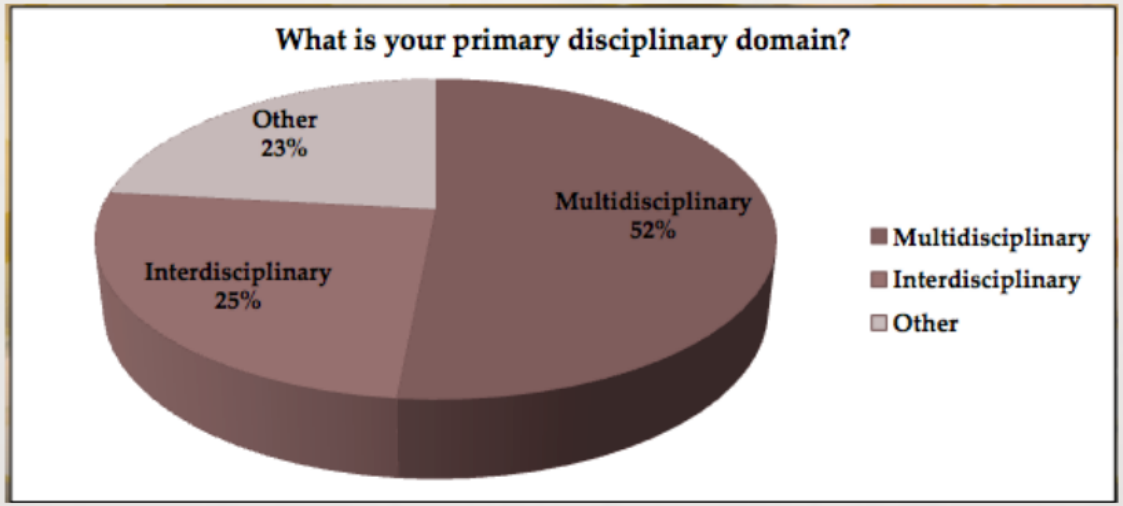
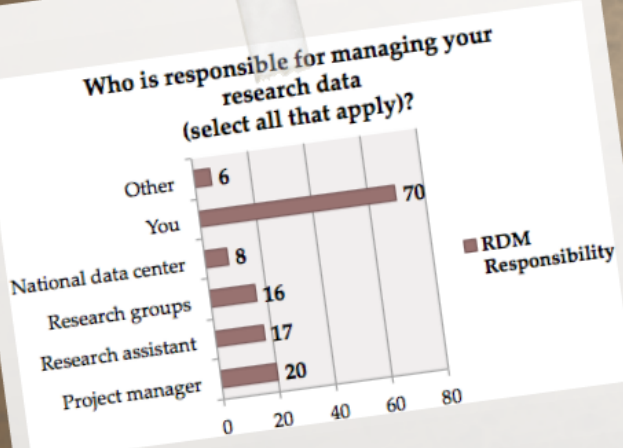
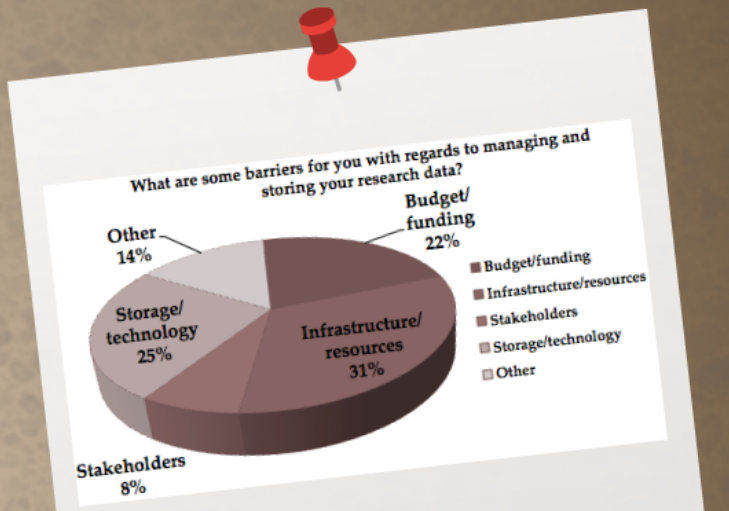


Findings - Primary Data Types

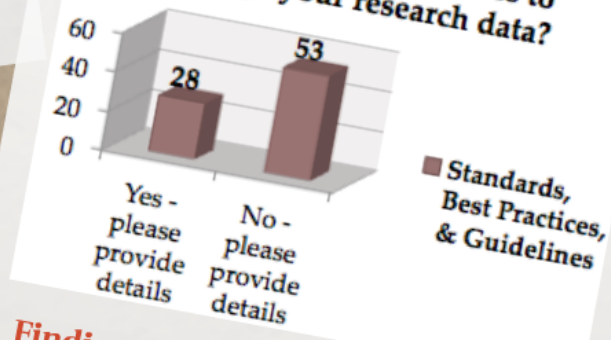
- 78% (74) Experimental (scientific experiments and computational results)
- 61% (58) Derived data (processing or combining 'raw' or other data)
- 51% (48) Computer code (model & simulation code)
- 44% (42) Observational (scientific phenomena at a specific time or location)
- 27% (26) Reference (ex. gene sequences, chemical structures or literary texts)
- 3% (3) do not hold any primary data
- 2% (2) Other (videos, images, audio files; project funding, cost & budget analysis)



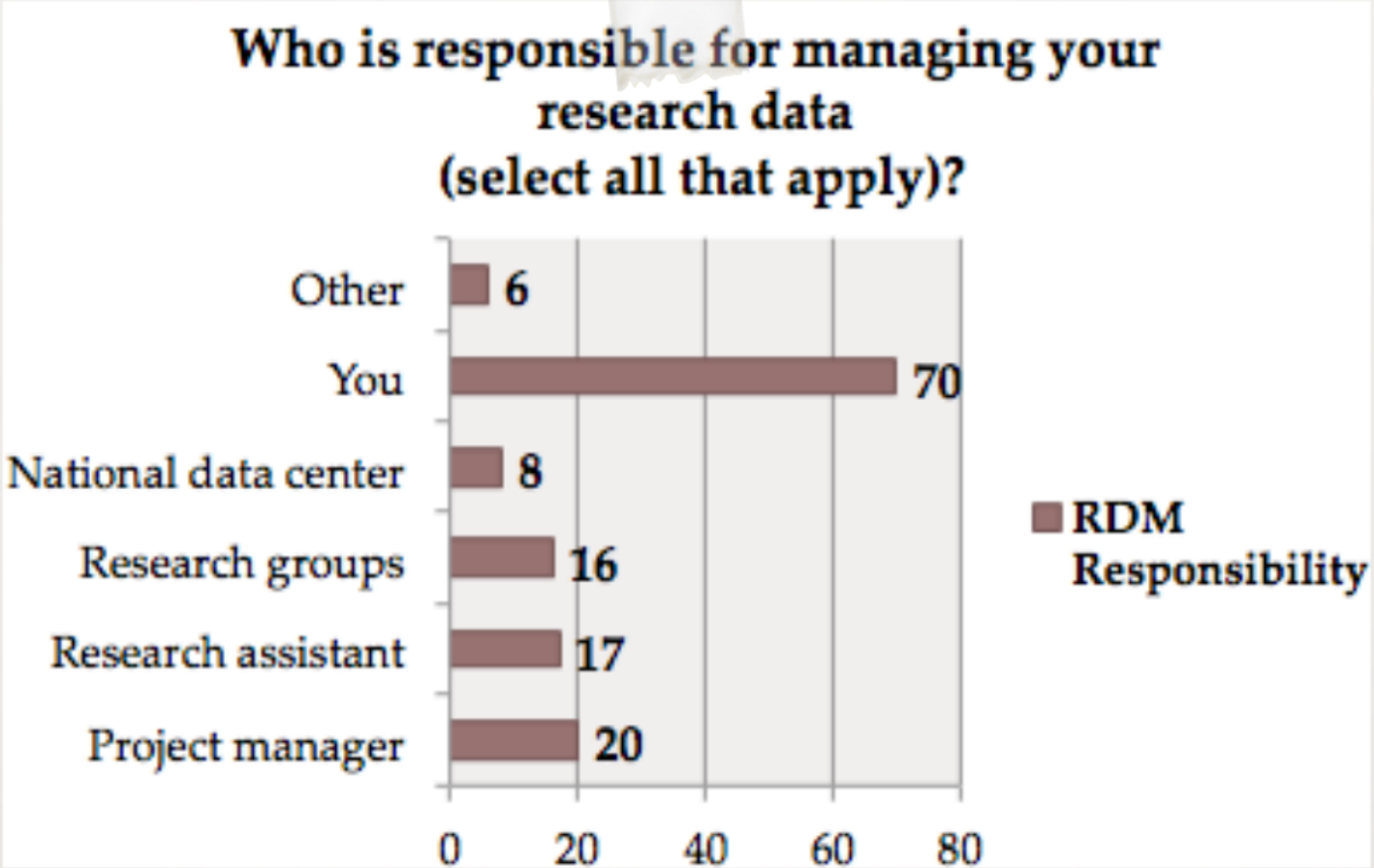
Findings - Research Data Management Responsibility



Findings - Barriers



Findings - Standards, Best Practices, and Guidelines



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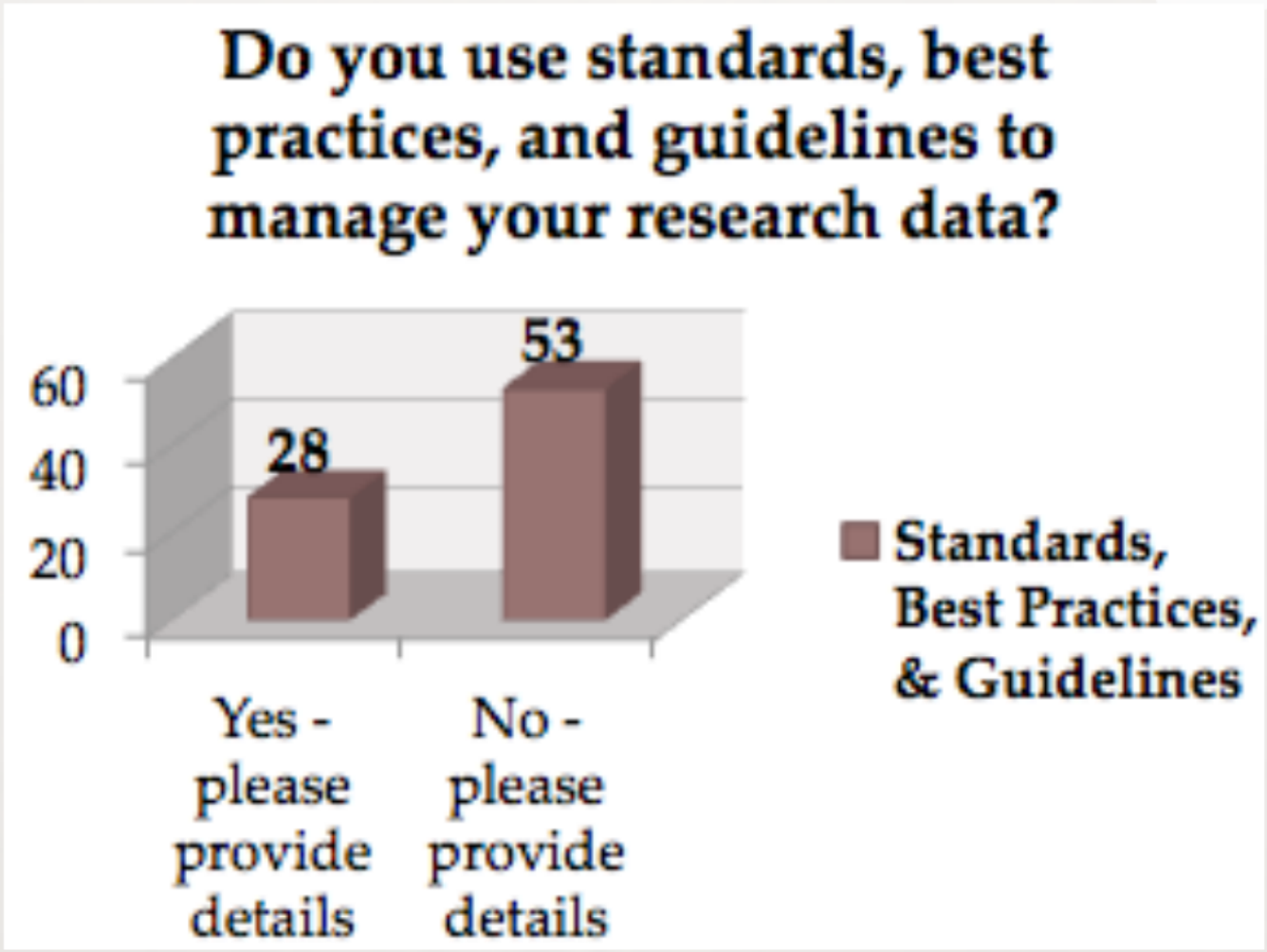

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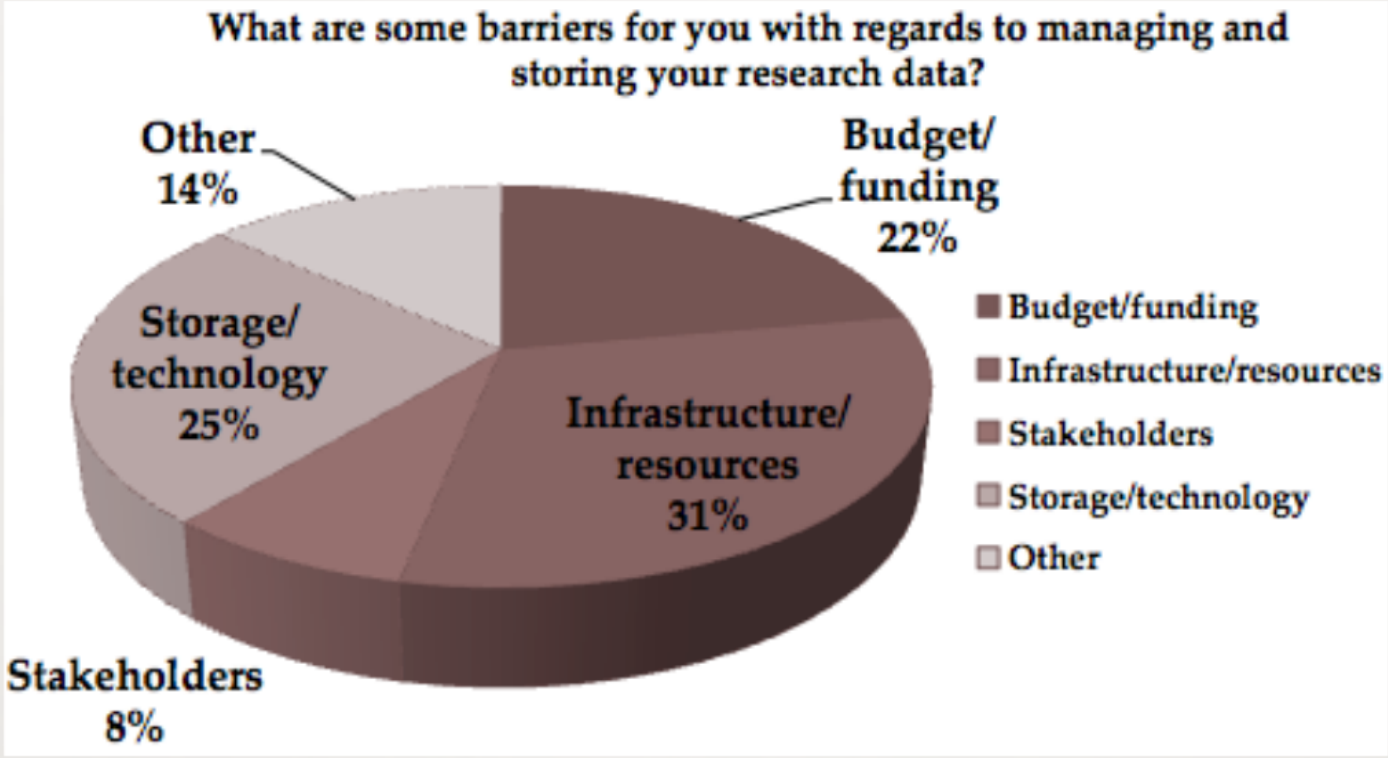

Findings - Barriers

Research Implications

A. Good DMC practices stimulate organized research data management awareness;

B. Organized research data management awareness allows stakeholders, institutions, and users to increase ROI;

C. Data management education exposure across multiple disciplines and departments raise data management cognition.

Practical Implications

1. Adherence to best practices, standards, and guidelines foster cogent data policies, promote good DMC practice, and enable new research built on accessible & existing data;

2. Data standards improve departmental and institutional level data management accountability;

3. Good data policies support funding agencies data management plan requirements.

Social Implications

- Proper data lifecycle management increases data access, discovery, use/reuse;

- Metadata standards provide the origin, nature of research data, and extend the usefulness of data to science, research, and education;

- The current and future use of data allows users and the research learning communities to study, duplicate, and/or advance existing research thus creating new and/or derivative research.

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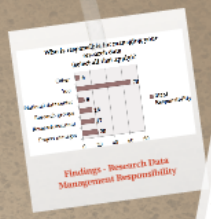

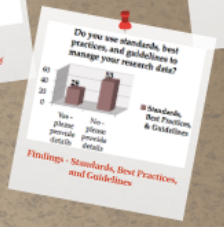

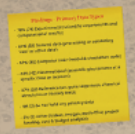

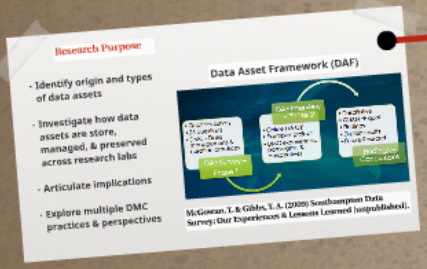

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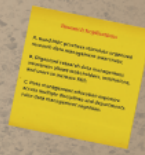

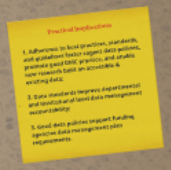

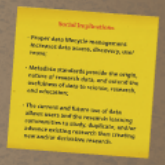

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