Data management
Tailoring the message

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Tailoring the message

Objective
The objective of this breakout out session is to discuss ways to talk about key concepts in data management and how we can tailor our messages to more effectively relate to and connect with researchers and students.

Format of Presentation

Try this...
Ways that I have adapted how I think about data management topics

Instead of this...
How I was ‘brought up’ to think about data management topics

Caveats

• Knowing your audience or Getting to know your audience
  • Disciplinary differences
  • Stage in career differences
• Try this, try that, try the other thing
• Not (yet) scientifically proven
Data Management

Activities that contribute to effective storage, preservation, and reuse of data and documentation throughout the research lifecycle.
Data Management

*Try this...*
Reproducibility

*Instead of this...*
Good Research Practice
Data Management Planning

NATIONAL ENDOWMENT FOR THE
Humanities

NSF

NIH National Institutes of Health

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

USDA United States Department of Agriculture

DEPARTMENT OF ENERGY UNITED STATES OF AMERICA

NASA
Data Management Planning

Try this...
Compliance

Instead of this...
Save you time and resources

Next week we've got to get organized
Describing Data

The FAIR Guiding Principles

To be Findable:
F1. (meta)data are assigned a globally unique and persistent identifier
F2. data are described with rich metadata (defined by R1 below)
F3. metadata clearly and explicitly include the identifier of the data it describes
F4. (meta)data are registered or indexed in a searchable resource

To be Accessible:
A1. (meta)data are retrievable by their identifier using a standardized communications protocol
A1.1 the protocol is open, free, and universally implementable
A1.2 the protocol allows for an authentication and authorization procedure, where necessary
A2. metadata are accessible, even when the data are no longer available

To be Interoperable:
I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
I2. (meta)data use vocabularies that follow FAIR principles
I3. (meta)data include qualified references to other (meta)data

To be Reusable:
R1. (meta)data are richly described with a plurality of accurate and relevant attributes
R1.1. (meta)data are released with a clear and accessible data usage license
R1.2. (meta)data are associated with detailed provenance
R1.3. (meta)data meet domain-relevant community standards
Describing Data

Try this…
Data documentation provides the information necessary to fully understand and interpret the data

Instead of this…
Metadata is stored in a structured form suitable for machine processing
Data Sharing
Data Sharing

Try this...
Publication of Data

Instead of this...
Open Data
Long-term Access

[Graphs showing trends over time]
Long-term Access

Try this...
Submit data to repository/archive

Instead of this...
Digital preservation
Emphasis on Re-Use

Building a Culture of Data Citation

CREATE
1. Dataset is stored in a publicly accessible repository
2. Researcher uses ANDS services to mint a Digital Object Identifier (doi) for the dataset
3. Australian researcher creates a research dataset and a publication related to the dataset

USE
4. doi is used in data citation
5. Research community generates new publications using the doi to reference the dataset
6. Research community generate new publications using the doi to reference the dataset
7. Citation metrics services (eg Scopus, Web of Knowledge) accumulate citation references to the dataset and publication

REWARD
8. Funding and research groups review publication and dataset citation metrics
9. Researcher future funding and promotion influenced by dataset citation metrics

MEASURE
10. doi

ands.org.au
Emphasis on Re-Use

Try this...
Increase your visibility and impact

Instead of this...
Encourage competing interpretations of the data
Tailoring the message

No lie. Librarians curated this information. It's good stuff. All in one place.
Thank you!

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Image Sources


Slide 4: http://4.bp.blogspot.com/-iCtEWcFyO9c/Uqf4g96ESDI/AAAAAAAABIU/TK-tnmBEqjk/s1600/science-not-science.png

Slide 4: The University of Sheffield http://library.nuigalway.ie/digitalscholarship/researchdata/researchdatamanagement/


Slide 7: Guiding Principles for Findable, Accessible, Interoperable and Re-usable Data Publishing version b1.0 https://www.force11.org/fairprinciples


Slide 10: https://www.cunahai.org/Files/Photos/images/27195/data_publication.jpg

Slide 10 https://fireoakstrategies.com/open-knowledge-graphic/


Slide 12: Digital Curation at the University of Maine http://digitalcuration.umaine.edu/media/var_confusing_strategies_parti_vga.png


Slide 14: Example of a Data Citation based on the the Joint Declaration of Data Citation Principles (2014). http://best-practices.dataverse.org/data-citation/

Slide 14: Kettle Table Lamp - Jonas Merian

Slide 15: lbrown.cbcpl. Exploring E-Resources https://www.flickr.com/photos/89181175@N03/8123381714