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ANSWERS FOR YOU

Creating Research Data Management Plans Using DMPTool

Presented by **Sponsored Research Services**

TEXAS A&M UNIVERSITY
Division of Research

Creating Research Data Management Plans Using DMPTool

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DMPTool
Build your Data Management Plan

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Goals for Today

1. Understand the basic principles of research data management;
2. Be aware of data management planning tools, support and guidance which are available to academic researchers;
3. Understand the different requirements of funding agencies;
4. Be able to use DMPTool to develop a data management plan, and maintain it through the course of your research.

Overview

- Why is data management important?
- What is a data management plan?
- Different requirements of funding agencies
- Use the DMPTool

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Research Scenario

You have completed one of your research studies and published a couple of papers to disseminate your research results. Your papers have been cited widely in the research literature by others who have built upon your findings. However, three years later another researcher has accused you of having falsified the data.

Why is data management important?

Data management is a set of practices across the research lifecycle that ensures:

- Compliance for grant requirements
- Research integrity and reproducibility
- Research efficiency and accuracy

Data Management & Sharing Mandates

- Funders – NSF, NIH…
- Journals – PLOS, Nature, JDAP partners
- The White House OSTP memo (2013) – Federal agencies with over $100 million/year in R&D must develop a plan to support public access to research

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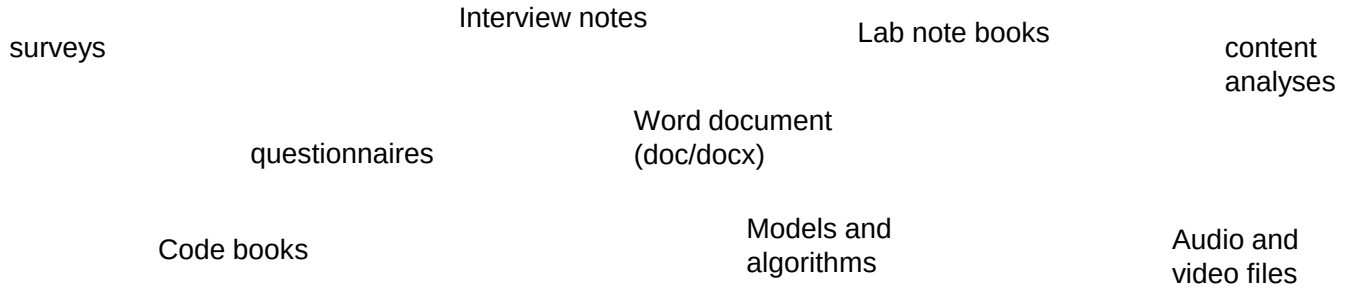
What is research data?

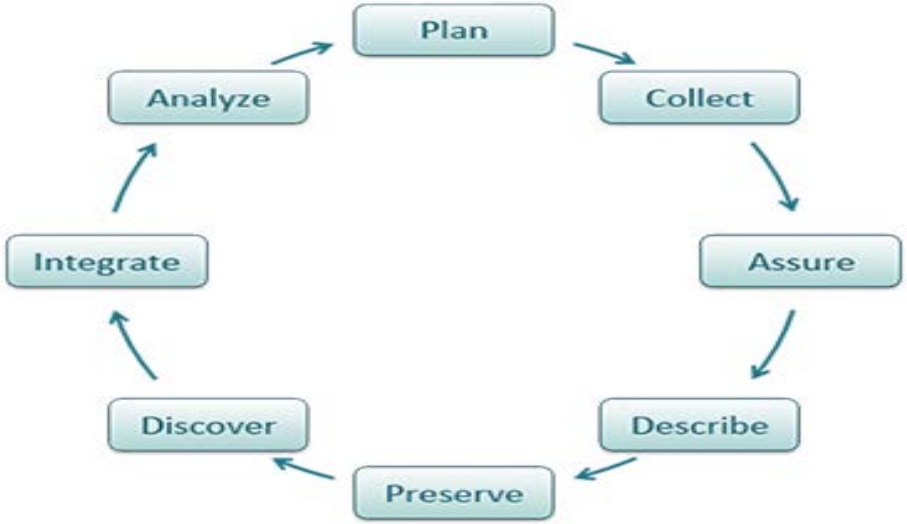
Research Data is recorded, factual material commonly accepted in the scientific community as necessary to validate research findings. (Awasthi & Tripathi, 2019)



What is Research Data Management

Research data management (RDM) is about handling research data effectively and appropriately throughout **the life of a research project and beyond**. Research data management refers to all aspects of creating, storing, sharing and archiving data and is an essential aspect of conducting responsible research.

Research Data Life Cycle



Dataone Data Life Cycle, available at https://dataone.org/data-life-cycle

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Components of a Basic DMP

1. Describing the Research Data
2. Data Standards and Metadata
3. Data Storage and Access
4. Intellectual Property and Re-use
5. Publishing Data and Preservation

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1. Describing the Research Data

Give a brief description of the data. Outline and justify your choice of format and consider the implications of data format and data volumes in terms of storage, backup and access.

2. Data Standards and Metadata

Describe the types of documentation that will accompany the data to help other users to understand and reuse it. Consider how you will capture this information and where it will be recorded. Wherever possible you should identify and use existing community standards.

3. Data Storage and Access

Consider where data will be stored and how you will control access to the data. Consider where, how, and to whom data with acknowledged long-term value should be made available.

4. Intellectual Property and Re-Use

Consider how the data may be reused. Decide which data to keep and for how long. Remember to consider any additional effort required to prepare the data for sharing and preservation, such as changing file formats.

5. Publishing Data and Preservation

Consider how datasets that have long-term value will be preserved and curated beyond the lifetime of the grant. Also outline the plans for preparing and documenting data for sharing and archiving.

FAIR Data Principles

- **F**indable
- **A**ccessible
- **I**nteroperable
- **R**e-useable

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National Science Foundation

- Beginning January 18, 2011 proposals submitted to NSF must include a supplementary document of no more than two pages labeled "Data Management Plan" (DMP)
- Data management requirements and plans specific to the Directorate, Office, Division, Program, or other NSF unit, relevant to a proposal are available at: http://www.nsf.gov/bfa/dias/policy/dmp.jsp.
- If guidance specific to the program is not available, then the requirements established in the NSF Proposal and Award Policies and Procedures Guide (PAPPG) apply.

Institute for Education Sciences

- DMP should not exceed five pages and is not be counted towards the Project Narrative's page limit
- Human Subjects and Privacy Issues
- Resource: March 2022, document, Sharing Study Data: A Guide for Education Researchers https://ies.ed.gov/ncee/pubs/2022004/

Department of Energy

- Requirements may vary by solicitation
  - Required as part of the proposal
  - Required within 90 days of award notification
- At a minimum, DMPs must describe how data sharing and preservation will enable validation of results, or how results could be validated if data are not shared or preserved.
- The published article should indicate how these data can be accessed.
- DMPs must protect confidentiality, personal privacy, Personally Identifiable Information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; avoid significant negative impact on innovation, and U.S. competitiveness

USDA - National Institute of Food and Agriculture (NIFA)

- Required document for Research, Education and Extension projects
- Limited to two pages and does not count toward the page limits for the project narrative
- Some programs may have different standards for DMPs and those will be outlined in the specific request for applications
- Plan Components: Expected Data type, Data format, Data storage and preservation, Data sharing, protection, and public access, Roles and responsibilities

NIH Current Policy – Data Sharing

- Under 2003 policy data sharing plan required for Funding agreements of $500,000 or more per year in direct costs
- Genomic Data Submission and Release Expectations
  - NIH's GDS policy sets forth specific expectations for the submission of data according to the type of data and level of processing.
  - Individual NIH Institutes and Centers (IC) may have additional expectations or requirements for genomic data sharing
- Plans should be included in the Resource Sharing section of the application

GET READY: New NIH Policy on Data Management and Sharing, Effective January 25, 2023

- NIH requires researchers to submit a Data Management and Sharing Plan. This policy applies to all research, funded or conducted in whole or in part by NIH, that results in the generation of scientific data.
- Plan will be part of the budget justification section.
- Plan will be two pages or less
- NIH Data Sharing webpage https://sharing.nih.gov
- Check Institute/center for specified data repositories

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What is DMPTool

The DMPTool is an online platform guiding DMP development according to the requirements of specific funding agencies. Texas A&M University researchers log in with their NetID and passwords.

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DMPTool for Data Management Plans

- Helps researchers meet requirements of NSF and other U.S. funding agencies.
- Guides researchers through the process of creating a data management plan.
- Is available to everyone.
- Provides additional help for researchers at DMPTool partner institutions

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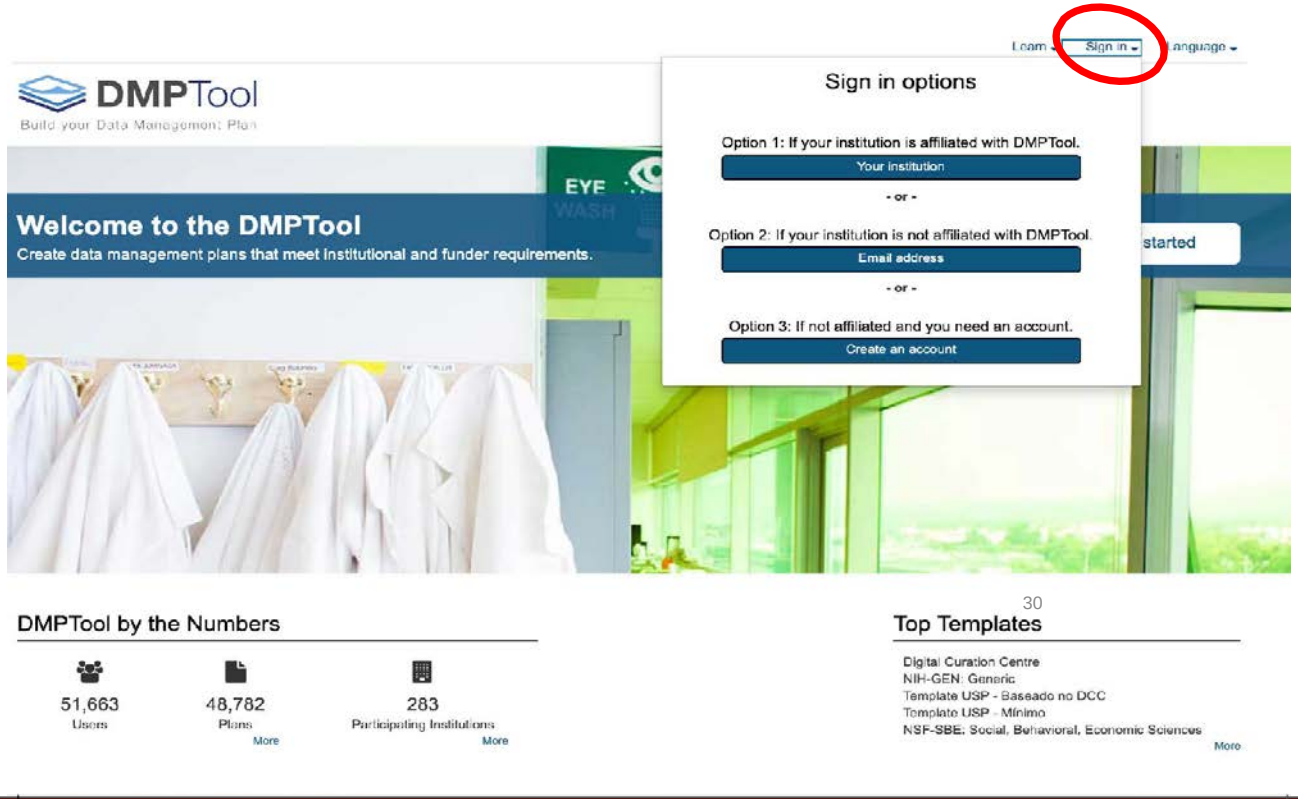
Sign in

Go to https://dmptool.org/ and sign in through ‘Your Institution’.



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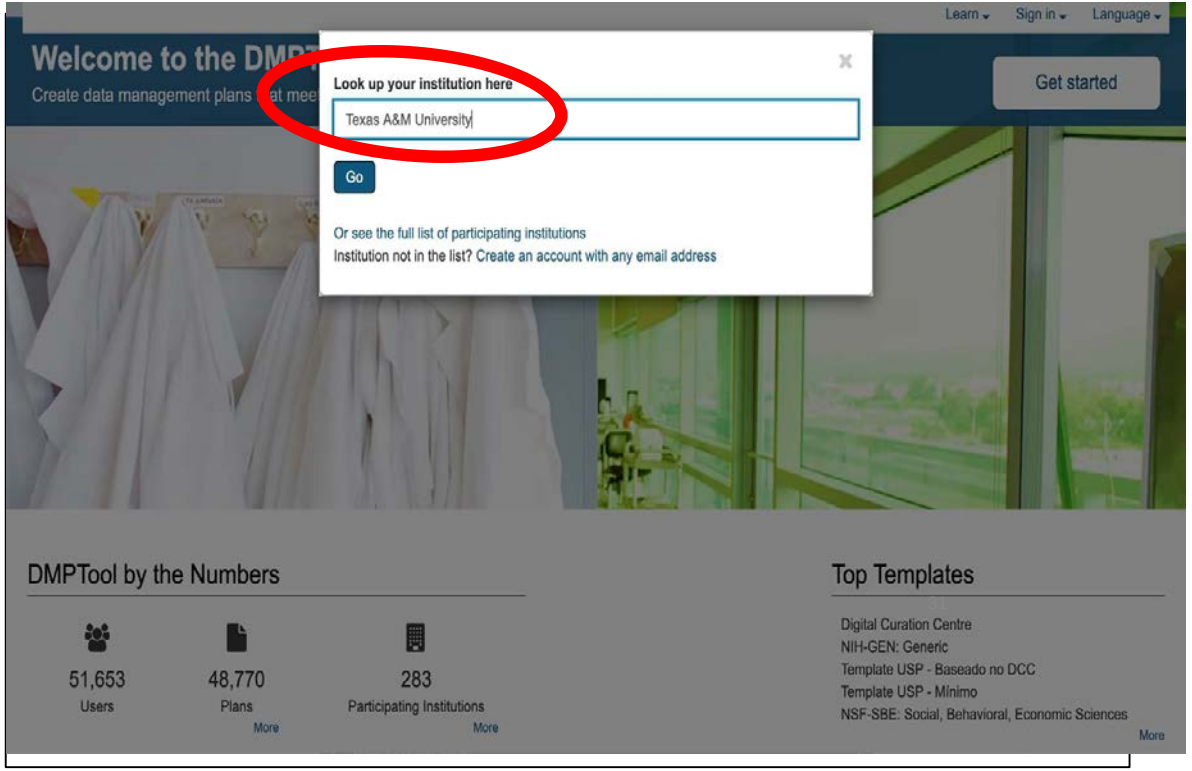
Select TAMU from the list of institutions



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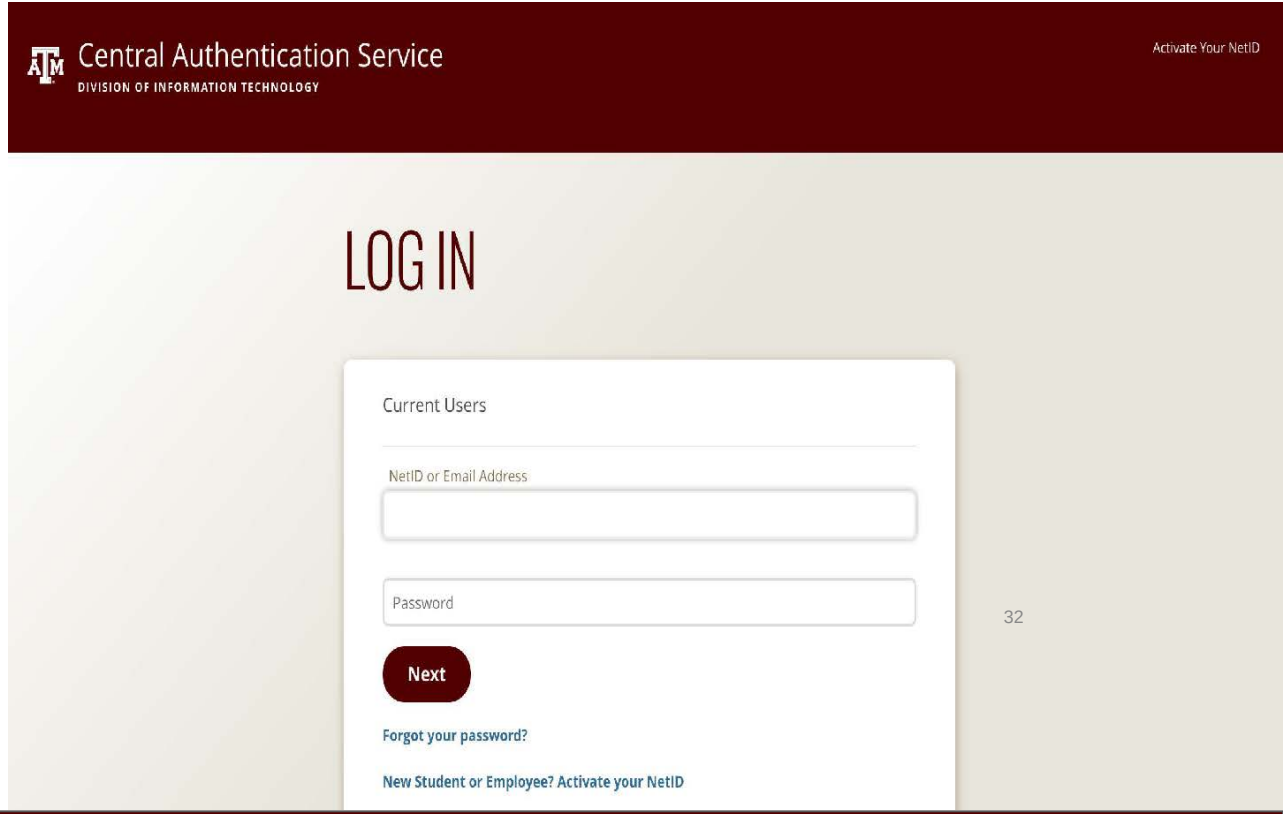
Sign in using your TAMU credentials



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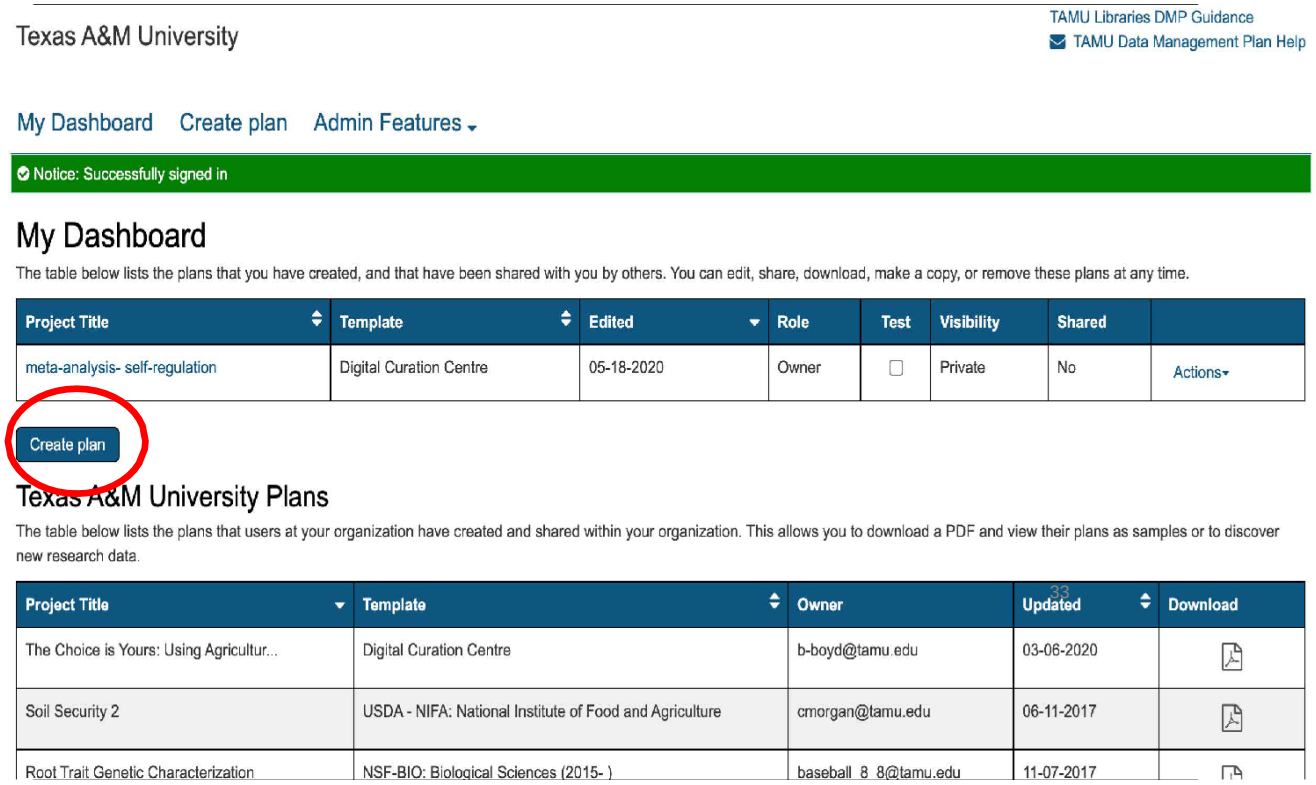
Create a plan

You can create a test DMP to access the DMP template.



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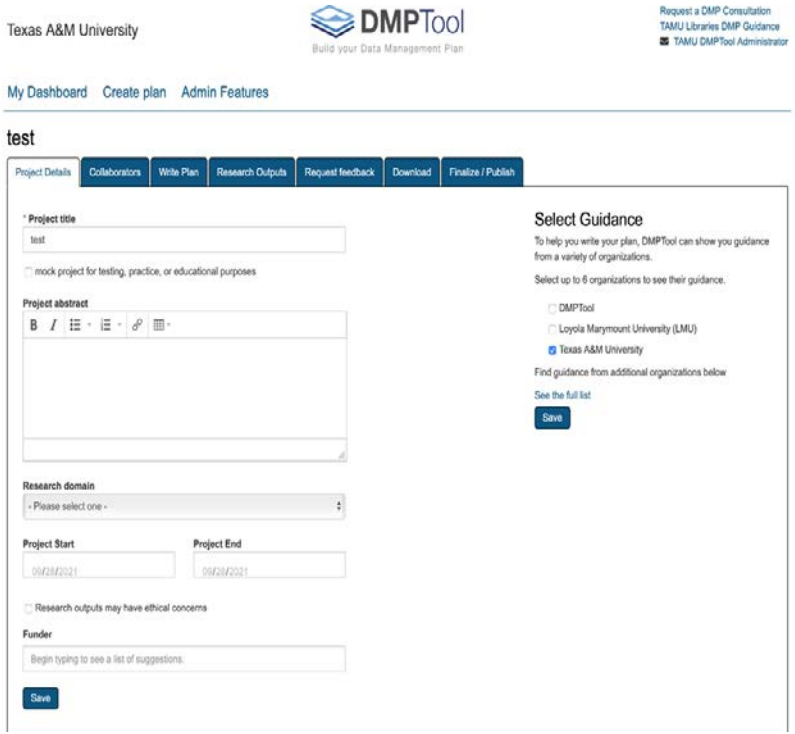
Project details

On the left, enter funder and grant information.
On the right, make sure TAMU is checked under ‘Plan guidance configuration.’
This ensures that you’ll see step-by- step guidance specifically for TAMU researchers as you write your plan.
Optionally, you can add other guides as well by clicking ‘See the full list.’



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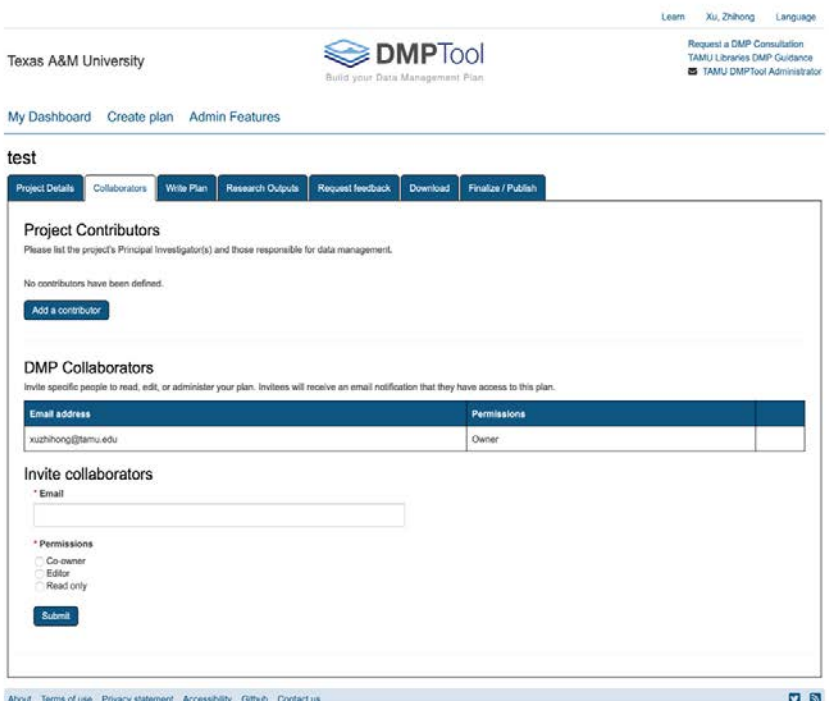
Collaborators

On this page, you could add collaborators of the project.



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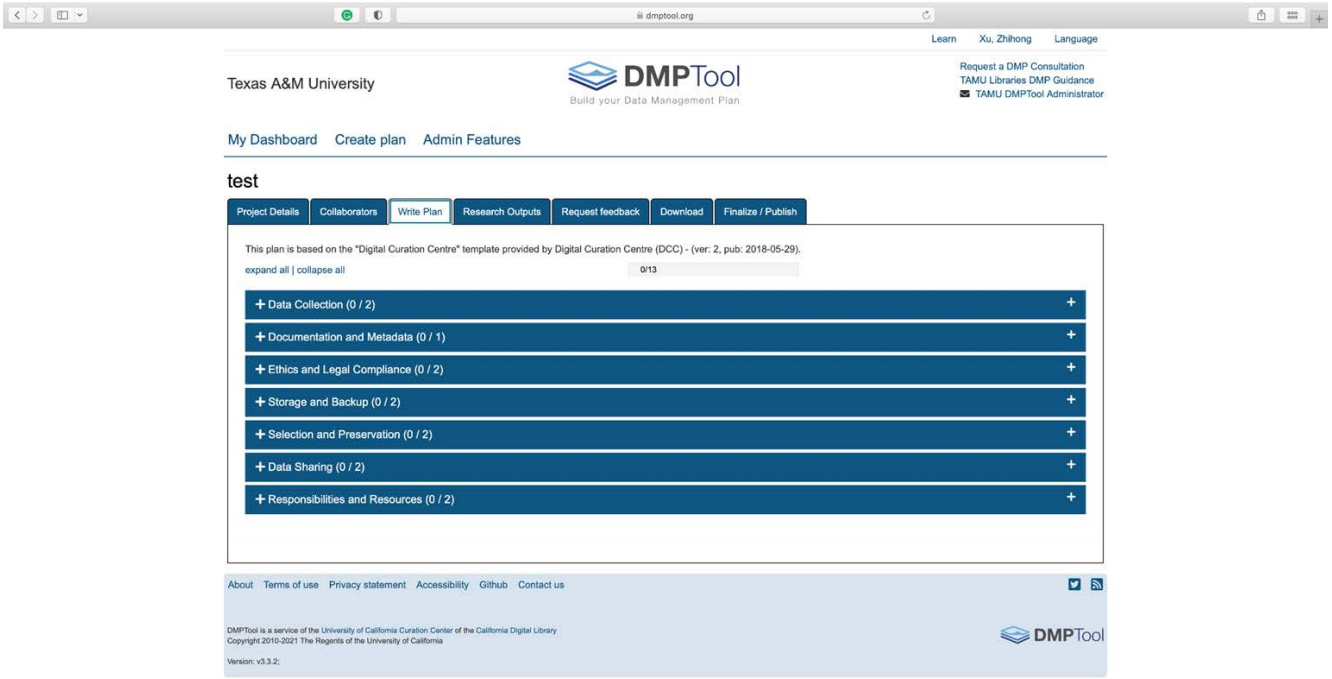
Write Plan

Here you will see an expandable section for each topic covered in your plan.

Click the + to see guidance and enter text.



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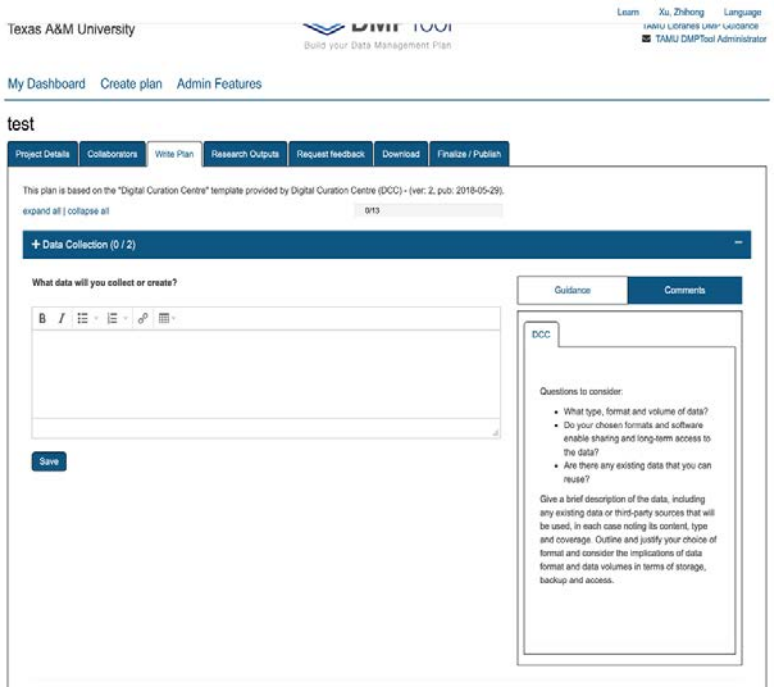
Access Guidance

The text box on the right offers custom guidance about this section of your plan.

You see a DCC tab, and any other guidance you elected to add in your project details right now. There is also a TAMU tab if you chose TAMU before.



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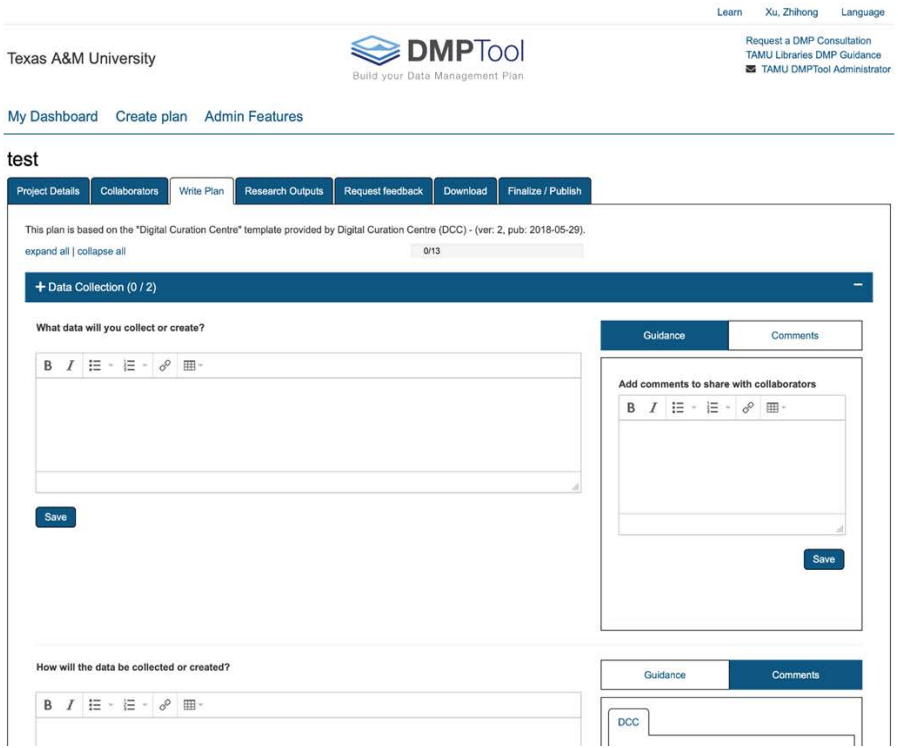
Access Comments

In the second tab beside Guidance, your collaborators can provide you comments about your DMP.



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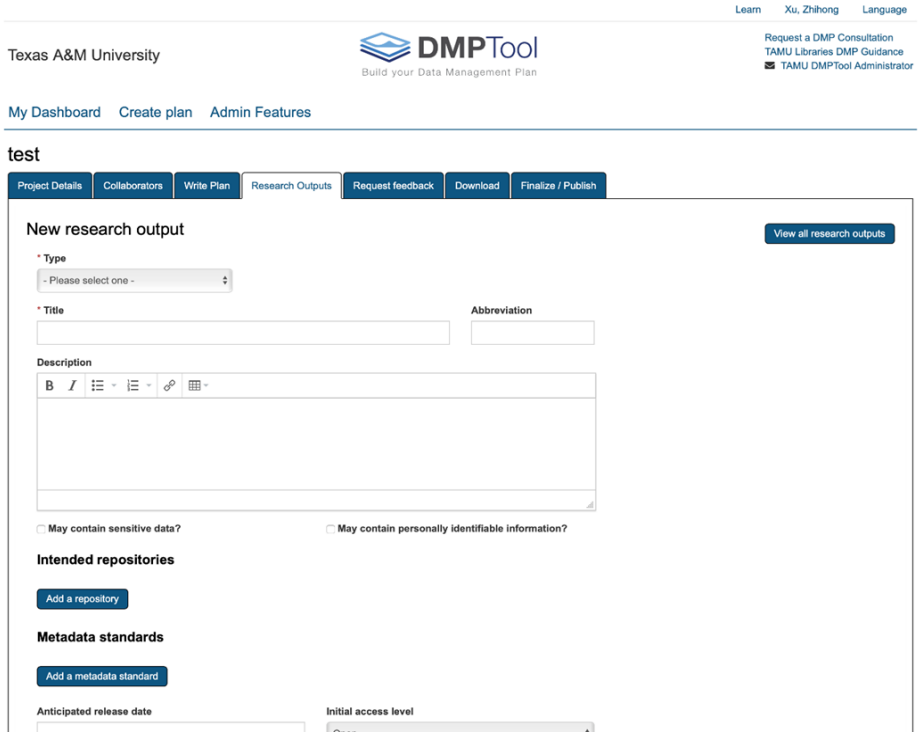
Research Outputs

On this page, you will be able to list your anticipated research outputs in your DMP.



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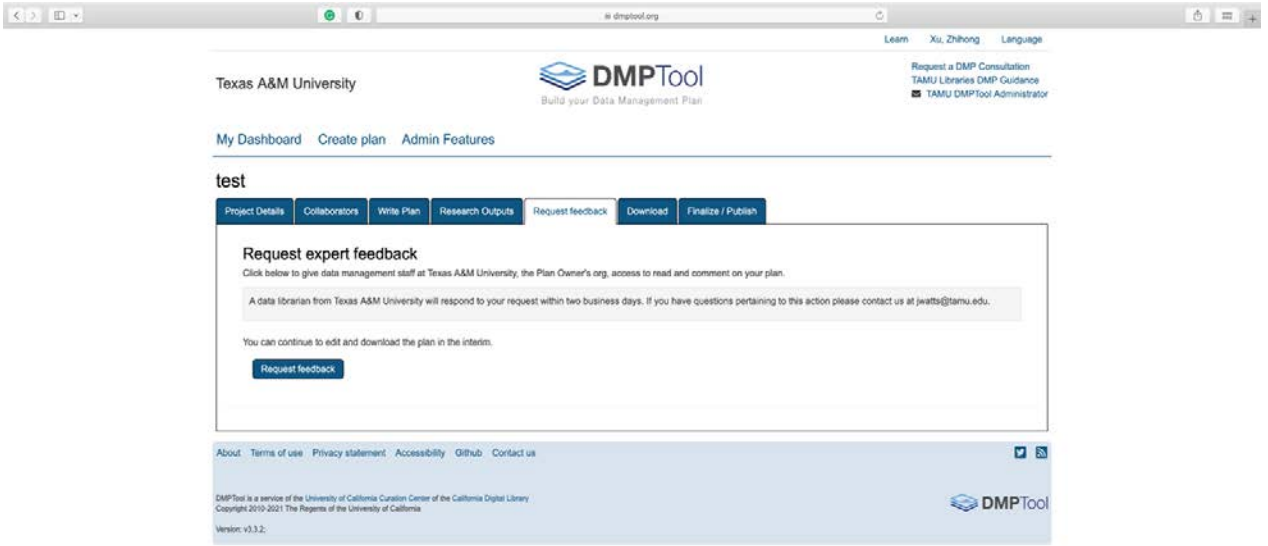
Request feedback

On this page, you can request feedback to your DMP. The Research Data Management Services team at TAMU Libraries will try to get back to you within two business days.



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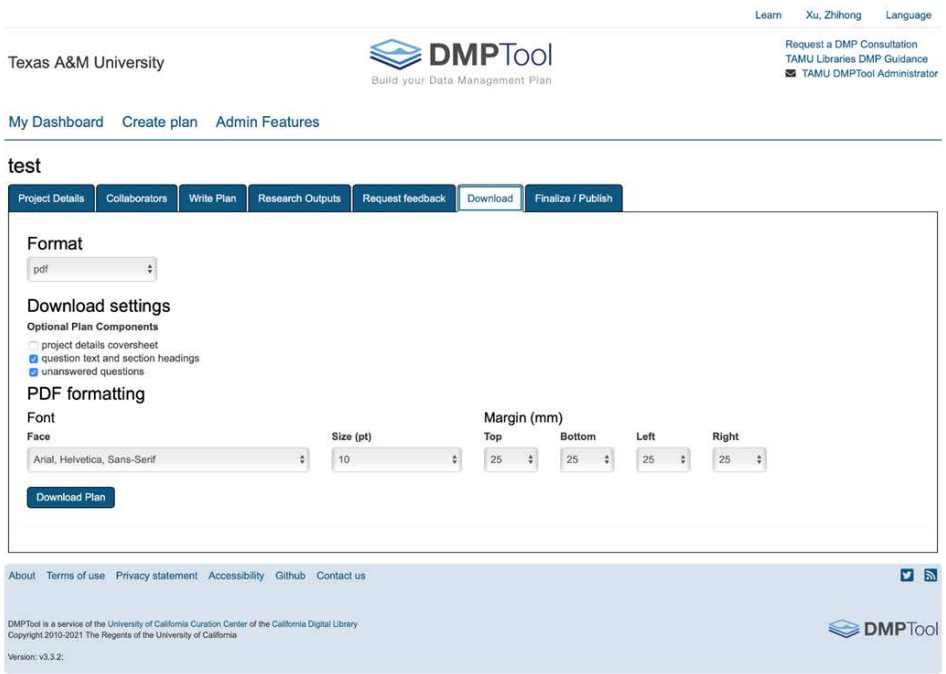
Download

When you have completed all sections of your plan, the DMPTool gives you the option to export your plan as a PDF or as a DOCX file that you can edit in Word.



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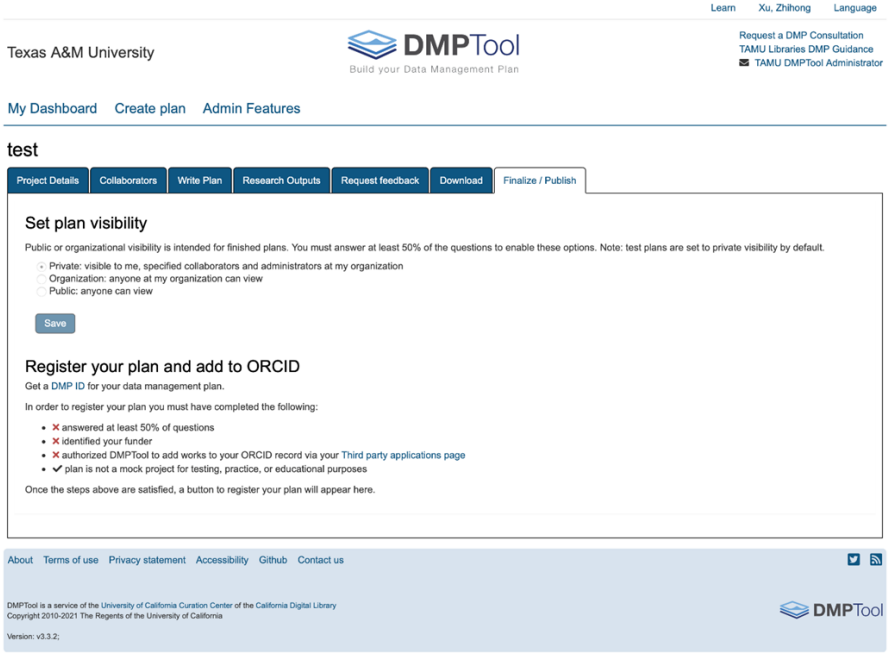
Finalize/ Publish

When you have completed all sections of your plan, you can publish your DMP when you are ready and get a DMP ID for your data management plan.



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DMP ID Landing Page

After receiving a DMP ID, DMPTool will generate a DMP landing page that includes high level details about the plan. For an example of a DMP ID landing page please see this DMP.

References

Awasthi, S., & Tripathi, M. (2019). A Selective Review of Literature on Research Data Management in Academic Libraries. *DESIDOC Journal of Library & Information Technology*, *39*(6).

The University of Edinburgh. (2020, September). *MANTRA: Research Data Management Training*. Available at: https://mantra.edina.ac.uk/index.html

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Thank You

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