Documentation in the Middle:
Active Phase Project Documentation for Inclusive and Effective Team-Based Research

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Problem Statement

Documentation is an essential component of good data management yet data service providers often struggle to provide effective support to researchers.

Team-based and multi-disciplinary research create increased opportunity for misunderstandings impacting quality, efficiency of research, and researcher experience.

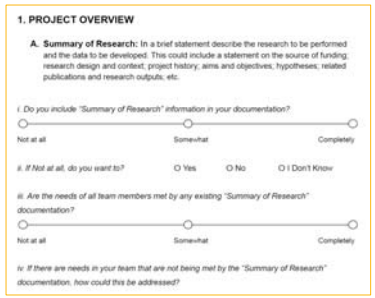
Materials exist for creating or assisting researchers with documentation at the *beginning* and *end* of a project; from data management plans to documenting data for archival purposes. However, there is a lack of materials to assist researchers during the *active phase* of a research project.

Researchers need assistance with improving their documentation practices to improve shared understanding about:

- Research team roles
- Research protocols
- Workflows
- Processes and procedures

Interactive Tool: Worksheet

Use for researcher self-assessment or data service provider-led interview


1. PROJECT OVERVIEW

A. **Summary of Research:** In a brief statement describe the research to be performed and the data to be developed. This could include a statement on the source of funding; research design and context; project history; aims and objectives; hypotheses; related publications and research outputs; etc.

i. Do you include "Summary of Research" information in your documentation?

Not at all — Somewhat — Completely

ii. If Not at all, do you want to? ○ Yes ○ No ○ I Don't Know

iii. Are the needs of all team members met by any existing "Summary of Research" documentation?

Not at all — Somewhat — Completely

iv. If there are needs in your team that are not being met by the "Summary of Research" documentation, how could this be addressed?

The Tool

U-M Librarians collaborated to create a new tool for documenting the active phase of a research project. We will continue to refine the tool based on further investigation and analysis of real and ideal documentation practices within research teams.

Our goal is to identify the basic considerations that any researcher from any discipline should consider for their local documentation in support of team-based research projects.

Project Manual Documentation Template

1. Project Overview
- Summary of Research
- Roles and Responsibilities
- Individual Team Member Documentation

2. Project Management and Organization Plan
- Folders and Files
- Storage and Backup

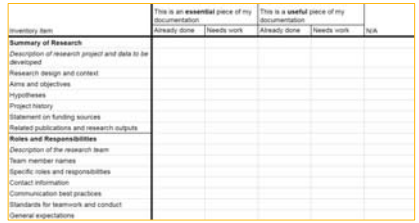
3. Data Collection & Processing Documentation
- Data Collection Methods
- Data Processing Methods
- Metadata
- Sensitive Data Considerations

4. Data Analysis Documentation
- Data Analysis Methods
- Dataset Versioning
- Master Dataset Rules

Tools and Handouts
tiny.cc/datadoc

Interactive Tool: Inventory

Use for researcher self-assessment


Inventory Item	This is an **essential** piece of my documentation		This is a **useful** piece of my documentation		
	Already done	Needs work	Already done	Needs work	N/A
Summary of Research					
Description of research project and data to be developed					
Research design and context					
Aims and objectives					
Hypotheses					
Project history					
Statement on funding sources					
Related publications and research outputs					
Roles and Responsibilities					
Description of the research team					
Team member names					
Specific roles and responsibilities					
Contact information					
Communication best practices					
Standards for teamwork and conduct					
General expectations					

Applications & Benefits

The Project Manual Documentation Template can be used as an interactive tool to promote:

- Inclusion
- Communication between team members
- Consistency and efficiency in collaborative research
- Improved onboarding of new team members
  - Structures something that everyone can understand
  - More clarity than oral instructions
- Creates shared reference points to answer questions arising

Additionally, data service providers can use the Project Manual Documentation Template as a teaching tool in data management instruction.

A "lab manual" or "project organization protocol" will enhance the effectiveness and efficiency of research teams, while creating an inclusive environment by making local practices and expectations clear to all team members regardless of previous research experience and disciplinary background.