



Research Data Curation Program Learning Support Plan

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1.0 Introduction

The Research and Data Curation Program (RDCP) at the University of California, San Diego (UCSD) Library interacts with a diverse group of faculty/researchers, librarians, graduate students, and undergraduate students. As a whole, this audience has varying expertise in understanding and using the best practices associated with managing, sharing, and preserving data. As such it is necessary to create a Learning Support Plan that offers education and training that includes access to learning in both traditional in-person workshops as well as non-traditional online training support solutions.

1.1 Points of Contact

This Learning Support Plan was designed by the UCSD Library, Learning Services Program using instructional design approaches in conjunction with members of the RDCP team.

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1.2 Learning Services Implementation Support

Beyond the creation of the RDCP Learning Support Solutions Plan, the Learning Services Program is available to offer support in the following areas:

- Assistance with the design of targeted workshops, including creating learning outcomes, learning activities and assessment recommendations.
- Assistance with designing story boards in the creation of online demos or screencasts.
- Consultation services in the design of job aids or other learning support tools.
- Consultation services regarding the assessment of learning support tools and educational workshops.

2.0 Learning Analysis

The purpose of the learning analysis is to identify all tasks and concepts that librarians, researchers/faculty, graduate students and undergraduate students need to understand and/or perform in order to use RDCP services. In doing so, we examined the institutional challenges/opportunities that would impact training goals. We used these to determine desired results. These will help RDCP identify the learning objectives for various learning support solutions.

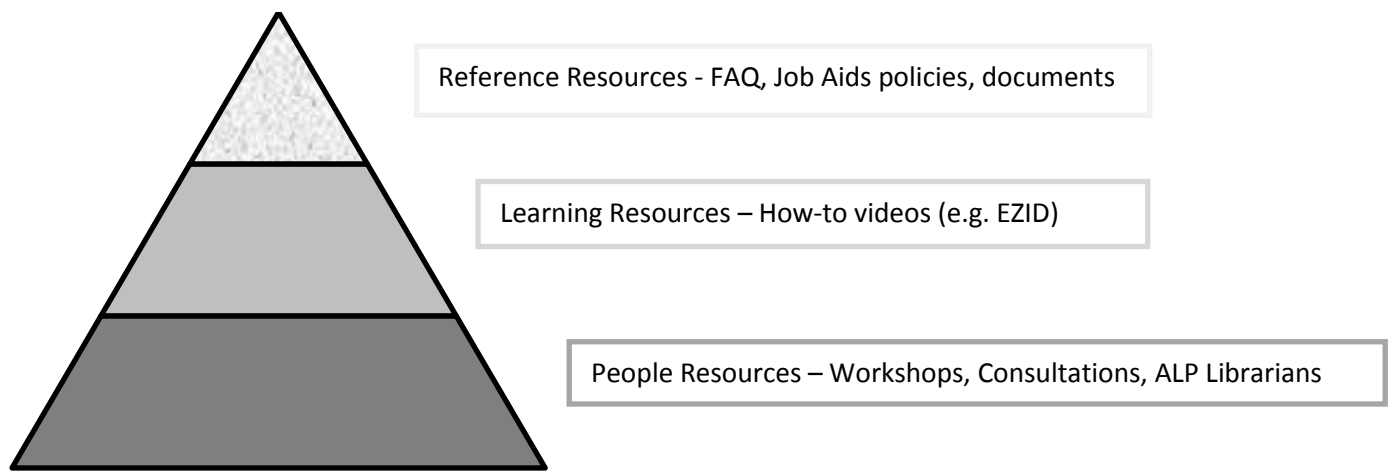
2.1 Learning Support Solutions Plan Objectives

Institutional Challenges	Goals	Desired Results
Funding agencies now have data management requirements.	Help researchers meet compliancy goals through the use of best practices.	Increased used of RDCP resources both in-person and online.
Communication between the RDCP program and campus divisions or departments can be difficult.	Increased communication/connections with campus divisions and departments.	_____ % increase in regular communication with divisions and departments.
Lack of knowledge concerning the various methods of data collection used between the disciplines.	Increased communication with campus divisions and departments regarding data collection methods and outputs.	Increased interest in use of RDM resources specific to data collection.
Lack of awareness of RDCP as a resource for research data curation.	Establish a successful education/training program that can be recognized as a go to resource.	Increased use of RDCP resources both in-person and online.
Adoption of the use of best practices in the data research lifecycle is not consistent.	Provide assistance to all levels of researchers regarding best practice.	Increased use of RDCP resources both in-person and online.
Expert knowledge of the data research lifecycle is dispersed through campus divisions, departments and centers.	Establish connections with other experts to attend workshop, include experts in FAQ, link to other resources on website.	Experts are identified and participate in the creation of training materials in-person and online as appropriate.

2.1 Learning Support Pyramid

As a result of the learning analysis, it was determined that the RDCP requires a robust Learning Support Plan that is scalable to meet a variety of learning needs and training goals. As indicated in the Learning Support Pyramid, once the program is implemented, faculty/researchers, librarians, graduate students, and undergraduate students will have access to the support they need regardless of expertise level both in-person and online.

Learning Support Pyramid



3.0 Audience Needs and Learning Support Solution

This section identifies the separate needs of each audience and suggests the learning support solution to meet those needs.

3.1 Librarians

Librarian education should focus on the concepts associated with the best practices of data management so that they have foundational knowledge. As librarians are unlikely to be creating a data management plan, their training should be more conceptual so that they understand the processes without focusing heavily on how to do the tasks. They should be able to explain a concept and help someone locate the tools or resources they need on the website. The librarian training should consist of:

- website navigation,
- understanding the data management lifecycle,
- understanding the basic parts of creating a data management plan,

- understanding preservation and the value of easy access and sharing,
- understanding funder mandates.

In support of librarian education regarding RDCP resources, services, and best practices, the following learning support solutions are suggested:

- online website FAQ that answer questions pertaining to funder mandates and the RDCP website,
- online access to any policies associated with funder mandates or creating a data management plan,
- online demos, screencasts, or images that help explain concepts,
- educational in-person workshops for concept learning,
- scheduled consultations with RDCP staff.

3.2 Faculty/Researchers and Graduate Students

Faculty/Researchers and Graduate student education needs to be conceptual as well as procedural. They need to be able to perform best practices work as well as know how to access RDCP resources and services. The Faculty/Researcher training should consist of:

- website navigation,
- establishing DMP tool account,
- creating EZID,
- creating naming conventions,
- creating file structures,
- creating metadata,
- creating DOIs/ORCID,
- depositing data,
- using storage depositories,
- using long term storage,
- understanding the data management lifecycle,
- creating a data management plan,
- understanding preservation and the value of easy access and sharing,
- establishing workflows,
- understanding funder mandates,
- understanding storage options.

In support of faculty/researcher and graduate student education regarding RDCP resources, services and best practices, the following learning support solutions are suggested:

- online website FAQ that answer questions pertaining to navigating the website, use of storage, use of storage depositories and funder mandates;
- job Aids that outline procedural steps and tasks should be created for establishing a DMP tool account, creating EZID, creating naming conventions, creating file structures, creating metadata, creating DOIs/ORID, depositing data, and using depositories;
- policies associated with creating data management plans and funder mandates;
- online demos or screencasts that show website navigation, how to establish a DMP tool account, create an EZID, creating DOIs/ORCID, depositing data, and using storage depositories;
- educational in-person workshops for website navigation, creating metadata, using storage depositories both DAMS and Chronopolis as well as conceptual information for understanding the data management lifecycle, creating a data management plan, understanding preservation, establishing workflows, understanding funder mandates and understating storage options;
- scheduled consultations with RDCP staff,
- liaison support from Librarians regarding navigating the website and concept education.

3.3 Undergraduate Students

Undergraduate students are unlikely to be in a role of creating or managing data at a faculty/researcher or graduate level, however they could benefit from understanding the concepts and best practices of data management and have access to the other training resources. Undergraduate education should consist of:

- website navigation,
- understanding the data management lifecycle,
- understanding preservation and the value of easy access and sharing.

In support of undergraduate student education regarding RDCP resources, services and best practices, the following learning support solutions are suggested:

- online website FAQ that answer questions pertaining to the RDCP website,
- online demos, screencasts, or images that show website navigation, understanding the data management lifecycle, understanding the preservation and the value of easy access and sharing,
- educational in-person workshops for concept learning,

- scheduled consultations with RDCP staff,
- liaison support from librarians regarding website navigation and concept education.

4.0 Importance of Online Learning Support Tools

Online support tools such as a website FAQ, job aids, and online demos play a crucial role in the RDCP Learning Solutions Support plan as they provide education and instruction in the time of need. This enables individuals to access the information they need in order to complete tasks without the necessity of scheduling time to attend a workshop or schedule a consultation. Online support tools provide support for workshop attendees who need additional assistance after attending a workshop as well as reduce the workload of developing and maintaining workshops.

5.0 Developing Workshops

The development of workshops can be a resource intensive process. Generally the Learning Support Plan calls for workshops to explain conceptual best practices and uses online training support solutions for both concepts and tasks procedural support. This enables RDCP staff to provide asynchronous education and training opportunities when appropriate which can help reduce teaching workloads on RDCP staff and enable individuals to receive assistance wherever and whenever they might need it.

6.0 Implementation

The RDCP Learning Solutions Plan consists of various parts that can be developed concurrently and over time. For example, as workshops are being developed, job aids may also be designed and uploaded to the website. The RDCP team will need to prioritize the Learning Support Plan implementation. We suggest starting with the Librarians as an audience. Their role as liaisons is an important part of the support strategy for faculty/researchers, graduate students, and undergraduate students.

7.0 Learning Support Plan Evaluation

After implementation of the Learning Support Plan, an evaluation of the plan should be conducted to determine if it is meeting the educational needs of the target audiences and if the desired results from the plan objectives are being realized. Additionally workshops and learning support tools should be assessed to determine their effectiveness.

8.0 Conclusion

The RDCP Learning Solutions Support Plan can be phased-implemented allowing for flexibility and scalability as RDCP develops and makes available learning support tools such as a website FAQ, job aids, and online demos in conjunction with planned workshops. As outlined, the Learning Support Plan will enable RDCP to meet the needs of a diverse audience in terms of meeting educational needs as well as providing support solutions for users who need assistance while performing tasks and procedures.

Appendix A. Learning Support Grid

Use RDCP Services and Resources to Apply Best Practices of Data Management		Audiences				Learning Support Plan						
		Librarians	Faculty / Researchers	Graduate Students	Undergraduates	Reference Resources			Learning Resources		People Resources	
						FAQ	Job Aids (Steps)	Policies	Online Demos	Workshops	Consultations	Liaison Support
Tasks and Processes	1. Navigate the website	•	•	•	•	•			•	•	•	•
	2. Establish DMP Tool Account		•	•			•		•		•	
	3. Create EZID		•	•			•		•		•	
	4. Create naming conventions		•	•		•	•				•	
	5. Create file structure		•	•		•	•				•	
	6. Create metadata		•	•			•			•	•	
	7. Create DOIs/ORCID		•	•			•		•		•	
	8. Deposit data		•	•			•		•		•	
	9. Use storage depositories (DAMS)		•	•		•	•		•	•	•	
	10. Use long term storage (Chronopolis)		•	•		•	•		•	•		
Concepts	1. Understand the data management lifecycle	•	•	•	•				•	•	•	•
	2. Create a Data Management Plan	•	•	•				•	•	•	•	•

3. Understand preservation and the value of easy access and sharing	•	•	•	•				•	•	•	•
4. Establish workflows		•	•				•	•	•		
5. Understand funder mandates	•	•	•		•	•		•	•	•	
6. Understanding storage options	•	•	•				•	•	•		