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Implementing a Case-Based Research Data Management Curriculum
Lamar Soutter Library of the University of Massachusetts Medical School

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Introduction

The Lamar Soutter Library has spearheaded an initiative with regional partners to build upon the UMMS/WPI (2011) Frameworks for a Data Management Curriculum to create an online research data management (RDM) curriculum.

Goals for the Curriculum

- Gather a bank of teaching cases to illustrate important concepts from the curriculum for use in creating lectures and activities for postgraduate students (either online or in-person) to explore different RDM scenarios involving different areas of the research and data lifecycles.

- Help support student researchers to write their future Data Management Plans (DMPs) required or encouraged by research funding bodies like the NSF and NIH.

- Expose the students to the value of RDM planning throughout the steps of their projects in the hopes that they may choose to share their data with other researchers or make their datasets publicly available in an institutional or disciplinary repository.

Preserving the Researcher Narrative

The Lamar Soutter Library has created guidance materials and a strategy to support authors' endeavors to create RDM teaching cases that both preserve the explicit and implicit aspects of the researcher's narrative and highlight relevant RDM issues (teachable moments).

Explicit: **A researcher tells you that he or she has identified a problem naming and structuring their data files.**

Implicit: **A researcher casually mentions her research coordinator is leaving to take a new job in the middle of the project.**

Although not identified as a problem, you want to preserve this detail. It is an opportunity to highlight a common RDM issue: how do you plan for a transition when postgraduate students or research team members leave a project and they were responsible for managing the data?

What is a Teaching Case?

Teaching Cases illustrate and apply the concepts covered by a curriculum: putting theory into practice. Husock (2000) describes teaching cases as "real life" narratives that serve as the basis for classroom discussion and that do not offer their own analysis.

Best practices of RDM apply across all disciplines, but the use of teaching cases has been recognized by librarians for their value in emphasizing certain RDM issues for students conducting research in a specific discipline.

Problem Statement

Many RDM teaching resources …
- Use the term case study inconsistently;
- they lack an adequate number of appropriately detailed teaching cases that preserve both the explicit and implicit aspects of a researcher's narrative;
- and fail to present authentic and relevant RDM issues integrated with a curriculum so that students can apply their knowledge.

How to Construct an RDM Teaching Case

1: Instrument
Created a semi-structured interview instrument aimed to elicit RDM issues to which the students could discuss or apply concepts from the curriculum.

- Describe the purpose of your research project.
- Describe the roles of project team members over the course of the project.

2: Training
Held a webinar taught by an evaluation expert to prepare partner librarians to conduct their "data interview."

3: Framework
Created a hand-out with an example teaching case created by the evaluation expert.

4: Participants
Identified researchers that were conducting research relevant to the target population of postgraduate student researchers.

5: Interview
Conducted a semi-structured interview to capture the researcher's narrative.

6: Coding
Reviewed transcript for explicit and implicit aspects that highlighted important or relevant issues (teachable moments).
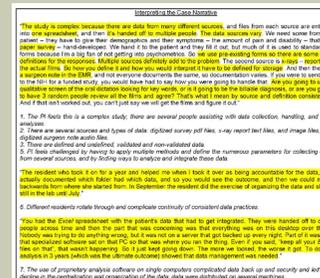
7: Narrative
Balanced cutting out irrelevant details with preserving information that is germane to understanding what the researcher is trying to do.

8: Integrate
Referenced the sections that apply to the appropriate sections within the curriculum.

9: Activities
Created comprehension and assessment questions, and activities, as well as found ancillary readings to support and guide the students' analyses of the teaching cases.

- Group Work
- Discussion Questions
- Assessments
- Presenations

Results

8 Cases Completed