

Preliminary Proposal - IMLS National Leadership Grant for Libraries 2018**Development of an Enhanced and Expanded Data Management Training Clearinghouse****Summary:**

The University of New Mexico is submitting a proposal for \$249,334 in support of the *Development of an Enhanced and Expanded Data Management Training Clearinghouse* project. In partnership with the ESIP Federation, DataONE, USGS, RDA-US, the NCAR Libraries, University of Notre Dame, Indiana University, and the University of Florida, and in potential partnerships with NASA, NOAA, the Network of National Libraries of Medicine, University of Michigan, University of Minnesota, Penn State University, and the U.K.'s Digital Curation Centre, this project builds on the partnerships and development efforts that produced the *ESIP Data Management Training Clearinghouse* (<http://dmtclearinghouse.esipfed.org/about>) to: 1) expand and diversify the educational content in and services of the Clearinghouse; 2) incorporate community feedback upon the existing descriptive characteristics of the content to support enhanced discovery and classification of content in the system; and 3) develop a community vetted assessment framework capability for gathering and sharing feedback on included content from trainers *and* trainees. These efforts will result in an enhanced Clearinghouse with significantly improved discovery capabilities that enables targeted discovery and reuse of existing content, and delivers well-structured and consistent feedback on materials to content developers while also providing user feedback to potential re-users.

Statement of National Need:

In recent years there has been an increasing recognition of the importance of effective research data management planning and execution. This recognition has developed largely in response to two factors: 1) the growth of collaborative data intensive research, and 2) increasing requirements from funding agencies and publishers for documented data management and sharing plans, and for evidence of execution of those plans through availability of research data products for discovery and reuse by other users. Meeting these needs has highlighted gaps in the knowledge, skills and abilities of researchers to effectively plan for and execute full-lifecycle research data management strategies, and in the cross-disciplinary and collaboratively acquired knowledge and skills needed by librarians to support those researchers¹⁻³. In an effort to fill these gaps many types, lengths, formats and modes of educational content from diverse organizations have been created on the management of research data. This variety has created an environment of growing confusion for potential consumers of educational content, however, rather than one of opportunity. In particular, the growing universe of materials targets different audiences and different parts of diverse research and data lifecycle frameworks. In addition, these materials are designed for delivery in a variety of modes, and in different disciplinary focus areas, thus highlighting the need for more effective tools for classifying and discovering educational resources that align with specific trainer/trainee needs. Furthermore, for content creators, the lack of a community agreed upon assessment framework that can inform their content creation decisions inhibits the effectiveness of their efforts. The proposed expansion and enhancement of the Data Management Training Clearinghouse is designed to address these related needs and directly relates to the key themes of the IMLS Focus Summary Report for the National Digital Platform report⁴ in the areas of user engagement and crowdsourcing, and continuous professional development for library professionals and researchers.

Project Design (Work plan):

Year 1:

- Specification of known / desired enhancements to the functionality of the existing services (browse, search, submission), and the web interface based on existing and ongoing user feedback.

- Development of an expanded content characteristics schema that addresses more specific classification needs for diverse educational content types.
- Increase in the inventory of educational content by organizing online and face to face crowdsourcing events of experts to identify, review, and submit metadata about educational resources appropriate for the Clearinghouse.
- Identify and invite representatives from research data, data librarian, and professional education communities to participate in metadata and content review panels, an Editorial Advisory Board, and smaller working groups as needed, e.g., for the content characteristics schema development efforts.
- Organization of workshop(s) of participants from science research data communities, data professionals including data librarians, and professional educators to begin to develop an assessment framework for the educational content in the Clearinghouse.

Year 2:

- Implement and perform user testing for feedback on the improvements & enhancements to the Clearinghouse.
- Continuation of assessment framework development including technical design of the incorporation of the assessment framework into the content and services of the Clearinghouse.

Year 3:

- Integration of the assessment framework into the technical infrastructure, content & services of the Clearinghouse.
- Iteration based on user testing & feedback on the improvements made in year 2.

National Impact:

The proposed project will build upon an existing successful and growing platform (<http://dmtclearinghouse.esipfed.org>) that provides basic discovery and browsing of research data management educational materials. This project will provide measureable improvements in the diversity, discoverability, usability, and quality of the educational materials included in the Clearinghouse by: 1) strategically expanding the holdings of the Clearinghouse to include a greater diversity of materials; 2) increasing the ability of Clearinghouse users to identify specific materials that meet their needs by improving the functionality and services of the Clearinghouse based on existing and continuously gathered user feedback, e.g., adding more effective and standardized search facets; 3) providing a cross-Clearinghouse assessment tool that is available to all content contributors for use in capturing user (both trainer and trainee) feedback that can inform continued development and improvement of available educational content.

Budget Summary of Total Estimated Budget: \$249,334

Salaries and Wages including PI salary, web/developer, and project management (\$96,120); Graduate Student Support (\$41,667); Participant Costs for travel and workshops (\$45,000); Travel, RDAP/ACRL Conference Travel for Clearinghouse Outreach (\$12,000); F&A (@ 51.5% Federal Rate): \$54,548

1. MacMillan, D. Data Sharing and Discovery: What Librarians Need to Know. *J. Acad. Librariansh.* **40**, 541–549 (2014).
2. Tenopir, C. *et al.* Changes in Data Sharing and Data Reuse Practices and Perceptions among Scientists Worldwide. *PLOS ONE* **10**, e0134826 (2015).
3. Tenopir, C., Sandusky, R. J., Allard, S. & Birch, B. Research data management services in academic research libraries and perceptions of librarians. *Libr. Inf. Sci. Res.* **36**, 84–90 (2014).
4. *IMLS Focus Summary Report: National Digital Platform | Institute of Museum and Library Services.* (2015).