



Journal of eScience Librarianship

putting the pieces together: theory and practice

Editorial

Advancing Data Management Education and Services

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Focus

This issue's editorial focuses on the response of librarians and information professionals to the United States government's open access mandates. Librarians and information professionals realize that developing strong data science education curriculum and data literacy skills, dialoging with each other about shared staffing goals, and discovering which data services an institution needs, are vital in helping institutions be able to meet these mandates.

Openness in government strengthens our democracy, promotes the delivery of efficient and effective services to the public, and contributes to economic growth. As one vital benefit of open government, making information resources easy to find, accessible, and usable can fuel entrepreneurship, innovation, and scientific discovery that improves Americans' lives and contributes significantly to job creation.

— Barack Obama. Executive Order. Making Open and Machine Readable the New Default for Government Information. May 9, 2013.

Beginning in January 2009, the U.S. government moved forward in requiring federal agencies to make data supported by government funding to be open, machine-readable, accessible, and discoverable. Fast-forward to 2017 and how quickly libraries, archives, and information teams have developed and/or changed their strategic paths in order to assist their institutions' research and teaching initiatives in complying with federal open data policies. The *Journal of*

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eScience Librarianship's recent issue offers articles focusing on data management education, development and review of data services, and the important roles library professionals are playing in this dynamic data science landscape.

Data science education has proven to be challenging for library and information science professors – like other academic institutions, library and information science (LIS) schools are facing more institutional scrutiny by graduate librarians and information professionals with marketable and measurable skills. In *JeSLIB's* video article, “Data science programs in U.S. higher education: An exploratory content analysis of program description, curriculum structure, and course focus”, Rong Tang and Watinee Sae-Lim discuss their research on analyzing cross-discipline data science programs in the United States. Tang and Sae-Lim discovered that there are significant gaps in current data science education. Many LIS schools face issues such as: merging with other graduate programs or schools, pressure from current library and information students and professionals to provide updated curriculum and post-graduate programs in data science, fewer students enrolling in LIS programs, and academia's financial shift to online education. The authors discuss how these challenges can be met by library and information science schools by helping students identify the importance of domain knowledge, acquire analytical skills, and creating curriculum that adopts new ways of handling and managing data.

Curriculum isn't the only way to provide data science continuing education. T. Scott Plutchak reviews two new books on data management, “The Medical Library Association Guide to Data Management for Librarians”, edited by Lisa Federer and “Data Management: A Practical Guide for Librarians”, by Margaret E. Henderson. Both books are timely for librarians and information professionals seeking advice and resources in developing new data management services or revising existing programs. Complementing the education theme, Megan R. Sapp Nelson, in her *eScience in Action* piece, “A Pilot Competency Matrix for Data Management Skills: A Step toward the Development of Systematic Data Information Literacy Programs”, discusses developing innovative existing data management competencies by identifying a scaffolding that moves students progressively from undergraduate training through post graduate coursework and research to post-doctoral work and into the early years of data stewardship.

The second *eScience in Action* article, “Data Curation Network: How Do We Compare? A Snapshot of Six Academic Library Institutions' Data Repository and Curation Services”, analyzes six institutions' data repository and curation services and how this analysis informs their goal of developing a shared staffing model across the Data Curation Network.

Following on the advice of Margaret Henderson, “Librarians working in research data management need to add value, not work, to a researcher's project,” and “Librarians need to remember that researchers don't think about their work the way librarians do,” Elizabeth Berman's three research articles present a study of faculty data management practices and data services at the University of Vermont. The study uses qualitative and quantitative methodologies, and integrative findings to discover the data management service and education needs of the institutions' faculty. This study suggests four major areas of research data services for UVM to address: infrastructure, metadata, data analysis and statistical support, and informational research data services. The implementation of these potential areas of research data services is underscored by the need for cross-campus collaboration and support.