An Assessment of Doctoral Biomedical Student Research Data Management Needs

Sponsored by UMass Medical School Lamar Soutter Library and Simmons Graduate School of Library and Information Science

Objective

This analysis explores specific institutional repository (IR) data management needs of the university's biomedical sciences doctoral students. Awareness, intentions, attitudes, and concerns about depositing, sharing, and publishing supplemental research data into the library's institutional repository eScholarship@UMMS were explored.

Method

A data needs assessment survey focused around the Digital Curation Centre's lifecycle model and National Science Foundation's requirements for data management was sent to 470 students via an email discussion list. Information gathered from the survey and digital repository literature aided in the construction of an overarching student data curation profile and criteria for repository functionality to meet the needs of both researchers and the repository manager.

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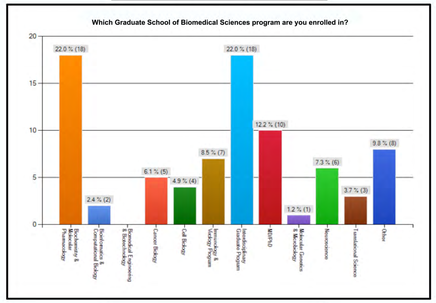
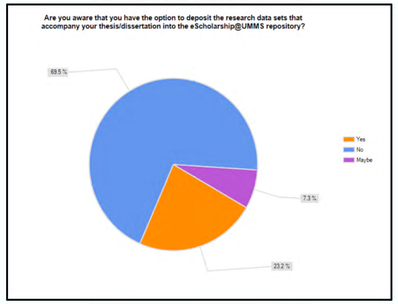
eScholarship@UMMS

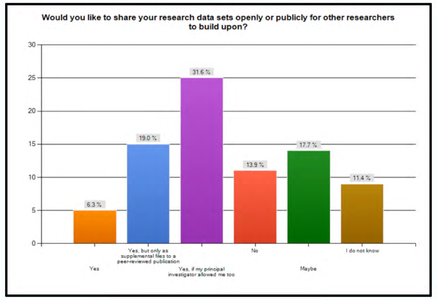
Academic Program



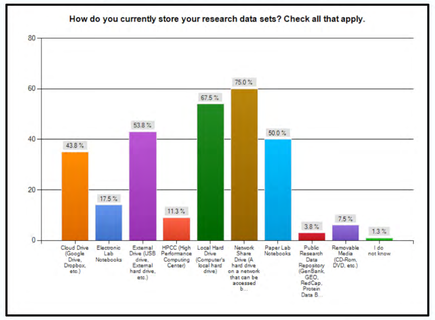
IR Awareness



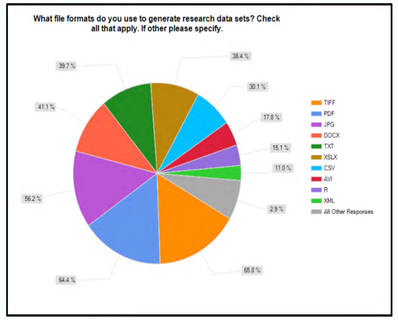
Data Sharing



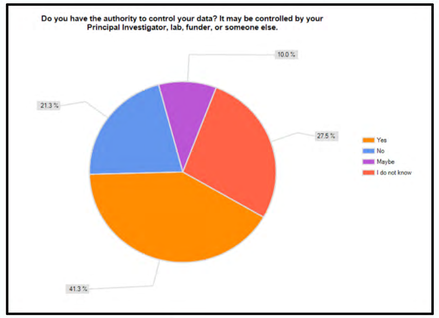
Storage



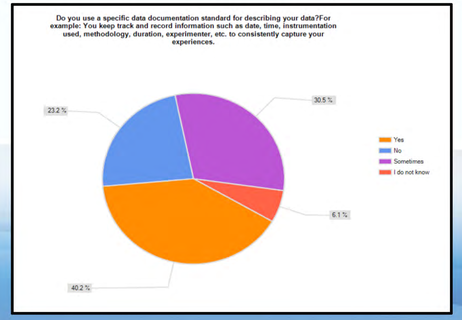
File Formats



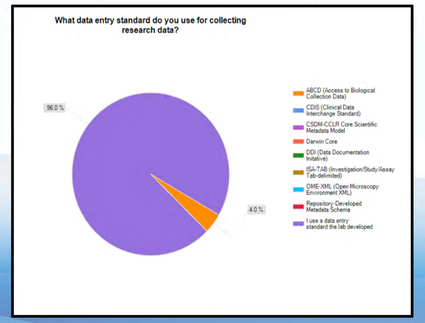
Data Control



Data Documentation



Data Standard



Results

Eighty-two biomedical PhD students responded to the data needs survey, a response rate of 17.4%. 69.5% were unaware that they had the option to deposit their research data sets into the IR. File format of data sets varied greatly but most common were TIFF, PDF, and JPG. 25.6% of respondents did not know the average size of their data sets. A network shared drive was the most common means of storing data (75.0%) but many used multiple methods. 96.0% reported using a metadata data entry standard developed by their lab. 13.9% stated they would not be willing to share data sets openly or publicly.

Conclusion

Responses from the survey and interviews suggest that an IR needs to be flexible to accommodate the research data needs of biomedical PhD students. Functionality to handle various file types, large files, and embargos is required. Education and outreach by library staff about the IR, data documentation, data sharing, and many facets of research data management would be useful. A broader environmental scan and further research are required to evaluate repository functionality in light of the needs of both researchers and the repository manager.