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Frank, Aline (2019). A second life for old research data: the challenge of post research data publication and how academic libraries could support it

Abstract

The interest in Open Science is growing within the scientific community. Nevertheless, many researchers still keep unpublished data stored on internal institutional servers or personal devices, hardly accessible to the scientific community. Scientists now increasingly intend to publish such data "post-research", i.e., sometime after the respective research projects were terminated. Academic libraries could step in here and provide support for the publication of old research data. This MAS thesis aimed at 1) evaluating if post-research data publication represents an issue to scientists at the University of Bern, 2) detecting challenges that may appear when publishing old research data in practice, 3) deriving guidelines on post-research data publication for researchers, and 4) proposing library expertise, services, and infrastructure to assist this kind of data publication.

A non-representative survey was conducted among biologists and geologists at the University of Bern. More than two thirds of the 21 respondents were aware of unpublished data in their research environment. Most of them considered these data still worth publishing, especially to make them findable, accessible, and reusable. They had a positive attitude towards several potential support options. A self-experiment was performed to experience the process of publishing old long tail research data in practice. Major challenges included the lack of information and guidance, in particular concerning data publication options and legal questions, and the underestimation of effort and time needed for preparing old data and metadata. Guidelines were proposed to provide advice to researchers. They comprise eight chronological steps that highlight key tasks and players during post-research data publication. In addition, they indicate at what stages support by academic libraries and external funders may be requested. The proposed library expertise, services, and infrastructure indicate that academic libraries could specifically assist post-research data publication by providing basic informative support, such as the presented guidelines. Furthermore, libraries could generally foster the publication of research data by providing thorough technical assistance and innovative IT infrastructure for data management. Basic services will require little effort for implementation, whereas advanced and expert support will involve major investments to hire specialized library staff and establish new institutional publication services.

Although post-research data publication will likely remain a sidetrack of current data publication efforts, it represents an issue that academic libraries – in collaboration with scientists and partner institutions – should approach to foster Open Science. The results of this thesis will be relevant to libraries that have the opportunities to further expand and strengthen their data management portfolios.