

How to get started with research data management training services for the academic library?

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Abstract

In 2012, Helsinki University Library began a one-year staff training to enhance research data expertise. The objective was to learn-data management (RDM) practices of the researchers. After training we started to plan RDM training and guidance services.

Case

The staff training was implemented as workshops, seminars as well as learning and development assignments between meetings. By teaching each other, the participants got to know national and international research data repositories of various fields. Researchers visited the workshops and provided examples of real-world data practices, for example metadata and handling of personal data in register-based studies. Repository service providers presented their services. The trainees carried out an assessment of the needs of RDM services.

After the staff training project, we started to plan RDM training and guidance services for researchers. In spring of 2014, we organize three workshops to plan RDM training for newly organized doctoral schools in the University of Helsinki. The training is part of information literacy education, and it will cover the very basics of RDM. This is our first step to develop RDM training services and we hope that it will create demand for more.

Conclusions

Many libraries in Europe are getting started with RDM services. We have trained our staff about the RDM practices of the researchers. Now we have an ongoing project for RDM training and guidance services. This case report provides an example how library can get started with RDM.

Keywords: Research Support as Topic, Information Management, Information Storage and Retrieval, Education

Introduction

Librarians are looking for new roles in serving researchers and collaborating with them. Research data management (RDM) services are a part of this development. Also, demands for data sharing from governments, funding agencies and science publishers have increased the need for these services. As a recent example, PLoS One requires opening the data for the papers they publish (1).

It is important to note that these needs are not fulfilled simply by providing a platform for sharing the data. Nobody wants to open ones messy wardrobe into the public. The whole life cycle of the data, from generation to analysis, documentation, metadata, copyrights, etc. must be in order, before researchers can open their data and fulfill the data sharing requirements.

Libraries have a significant trust capital (1). They are regarded by researchers and research administrators as reliable partners with whom to start organizing the wardrobes.

Quite commonly, RDM is assumed to be well organized in the medical sciences or at least in the biomedical field, where massive public data archives (such as GenBank) and RDM tools are routinely used. In some laboratories this certainly is true, but research shows that there is still much room for improvement. Often, the problem is primarily the lack of information or lack of proper tools. (2)

Thus, there is a clear need for RDM services, and the libraries are trusted potential partners. However, the development and launching such services requires training of the library staff. In 2012, Helsinki University Library began a one-year staff training to upgrade research data expertise. The objective was to learn to know the data management practices of the researchers. After the training, we started to plan RDM training and guidance services.

This is a case report describing this staff training project and the following RDM project.

Background

The first RDM project in the University of Helsinki was started in 2008 to define the needs for RDM services. The library was actively involved from the beginning. Since then, several RDM related surveys and development projects have been carried out by the library. However, RDM services have been a part of the normal library functions only from autumn 2013.

The library has good networks within the university. The library invited RDM related services (i.e. IT department, legal department, archive and research administration) to get together every couple of months to discuss RDM services. The library also has representatives in several national and international RDM projects (for example OpenAire). The University of Helsinki is in the process of formulating its official research data policy, and the library is involved also in this project.

Library staff training

In autumn 2012, Helsinki University Library started a staff training project, involving 15-20 library staff members and one project coordinator. To encourage the participants to get involved, an expectancy and target survey was carried out in the beginning, and the learning goals were set together. The workshops were as interactive as possible, and the participants taught each other. Halfway the course, feedback and suggestions for improvement were collected.

The University of Helsinki is a multidisciplinary research university and data management practices vary significantly between disciplines. In the training, data archives of various fields and the current status of RDM practices in the various campuses of the university were widely examined. In total, there were 10 workshops, each consisting of a 3-hour session.

The topics included research data archives, data management plans, usage of registry data, data documentation, metadata, and the Librarians' recommendations for libraries starting RDM (3).

Researchers visited the workshops and provided examples of real-world data practices, such as metadata and handling of personal data in register-based studies. Data archive service providers presented their services.

Between meetings, the participants had assignments. Skills required of a data librarians were examined in job advertisements and compared to the participants' current skills. RDM support websites of various libraries were studied. The participants also taught each other in important RDM issues, and made presentations on research data archives of their subject fields.

We also carried out a study on current RDM practices in the University of Helsinki. This included a literature review of current literature on RDM practices and challenges, and interviews of researchers, ICT personnel and the librarians of other libraries. An essential part of the process were the actual discussions with researchers about research data and RDM.

By the end of the training, we had obtained a remarkably clear consensus of the potential roles of the library in RDM, by hearing and interviewing researchers and others involved in RDM. These ideas were markedly similar to the Liber recommendations and included the following goals:

1. Strategy for organizing RDM services

- Strong support of the library management group is necessary, to ensure adequate resources.
- RDM services development projects will be launched in the library.
- The projects may consist of own research or development of specific services.
- RDM services are a part of the other researcher services provided by the library.
- Progress from providing services to partnership, which requires close relations to researchers.

2. Communication and web services

- Target audiences: students preparing MSc theses etc., doctoral schools, researchers, research groups
- All information needed by researchers in one location, with other researcher tools
- Collaboration with the university IT Centre, the Research Funding and the Research and Innovation Services unit, to ensure visibility

3. Training and information services

- Workshops for building training strategies and basic learning materials, involving experts of communication, technology and education from the library
- General presentations in the context of faculty meetings and courses
 - Involving also the IT Centre and other researcher service providers of the university
- RDM training is integrated in existing education provided by the library
- Students are contacted at a stage naturally connecting with RDM topics

4. Technical services

- Close collaboration with stakeholders
- Programming services and applications
- Open research data services
- Tools for data management planning
- Datalab workshops (topics: data, metadata, programming)

Planning RDM training and guidance services

After the staff training project, we started to plan RDM training and guidance services for researchers, not all at once, but in small doses. In spring 2014, we organized three workshops to plan RDM training for the newly organized doctoral schools in the University of Helsinki. The training plan will be implemented before summer, when the new doctoral schools start for the first time. The training is a part of information literacy education, and its contents will include the very basics of RDM. Our aim is to get doctoral students to think RDM as a tool for successful research and to urge them to find out more. This is our first step to develop RDM training services and we hope that it will create a demand for more.

Specifically, we aim to produce

- a training package for doctoral schools, including 2 hours of contact teaching and additional material distributed on the Moodle web platform
- a set of training materials covering known basic questions, useful for designing tailored training sessions

We will also plan the training schedules and marketing for target groups. Finally, a follow-up plan will be constructed.

The project team was assembled through the education specialists of the Library IL team in December 2013. There were 16 participants in the workshops. Some of them had taken the library data training. Six of the participants had no previous RDM experience or training. There was also one member of the university Research and Innovation Services unit, who is currently preparing a project plan for creating a research data policy for the university.

At the first workshop, we did the RDM training framework for doctoral schools, as follows.

RDM training framework for doctoral school

Before Contact teaching: Watch a couple of introductory videos and answer the multiple choice questions.

Topics of Contact teaching (2 hours)

- Welcome words and introduction
- Data management as a basic researcher skill (why)
- Data management plan
- Safe data storage
- Data documentation (data notebook, metadata)
- Activating task (for example, discussion in small groups about a given topic)
- Data security and privacy
- Data copyrights and licenses
- Benefits of data sharing
- Examples of data repositories of the student's own discipline
- How to find more information?
- RDM support in the University of Helsinki, whom to contact?

Learning task after Contact teaching:

- For example, familiarize yourself with the RDM guidelines of your department. (We honestly assume that there are no written RDM guidelines.)

Feedback

- Questions regarding RDM to be included in the feedback form of the Helsinki University Library doctoral school course.

The items in the training framework were assigned to the workshop participants, and in the second workshop we presented them to each other. The representative of the Research and Innovation Services unit presented the support services provided by the university, illustrating the views of the university administration on the roles of the library (and other support services) in providing RDM services.

The learning materials were based on existing material (DATUM for Health, Mantra, MIT RDM web pages etc.) and produced in Finnish or in English. The doctoral schools provide education in both languages.

In the second workshop, we used the activating method called “Role-play”. The participants received a two-way nameplate (doctoral student / myself). The presentations were thus given as if the audience consisted of students, and the questions were asked from students’ perspective. The topics were then discussed from the perspective of training and support services. Some questions were left open due to the lack of existing research data policy.

The third workshop will be organized after the first training sessions in doctoral schools in June 2014. We will evaluate these experiences, student feedback and suggestions for improvement. We will also process the draft of the RDM training services follow-up plan compiled by the workshop coordinator.

Next steps

Training in the Data Management Planning Tool (DPM) for researchers, research groups and departments is often recommended in the literature to be provided by the library (4, 5) Therefore, our next project will involve the introduction of DPM and its training. We will investigate the possibility to use the DMPonline by Digital Curation Center. It is not yet used in any of the Nordic countries, and thus the Nordic funding bodies such as NordForsk are missing from the database. We hope to be able to establish collaboration with some Nordic university libraries in this project.

We have also been requested the design and implementation of a more extensive RDM training tailored for a specific subject area. The library will discuss the contents of the training with the department staff. The library would then organize the actual training. This training will possibly be carried out in autumn 2014.

Conclusions

Libraries in Europe are getting started with RDM. We have trained our staff about the RDM practices of the researchers. Upgrading the skills of the current staff was successful and we also created a follow-up plan for the RDM services to be provided by the library. In our experience, the potential roles of the library are best clarified by charting the needs of researchers and research groups and by networking with providers of other research support services.

Now we have a new project of RDM training and guidance services. We are piloting these services in the medical campus, with medical researchers. New doctoral schools were launched in the beginning of 2014, offering an excellent opportunity for the library to provide training also in RDM. The project involved some new enthusiastic library staff who successfully joined without previous RDM training or experience. They are undoubtedly able to educate doctoral students on RDM best practices, together with the more experienced RDM experts of the library.

This case report presents one true story how a library can get started with RDM, step by step. We are willing to share our experiences about supporting RDM and look forward to fruitful information exchange among our international colleagues. Hopefully others can benefit from what we have learned and will implement these practices also in their organizations.

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