



Report on outputs on LIBER Winter Event Workshop “Data management skills and training development for libraries”

Introduction

On the 1st of December, 2022, the LIBER Research Data Management Working Group held a workshop, “Data management skills and training development for libraries,” during the LIBER Winter Event in Amsterdam. The aim of the workshop was to map skills and qualifications that library staff would need for successful data management and training development. The workshop materials can be found [here](#).

The workshop's target audience was LIBER libraries and other LIBER WG members. The workshop aimed to introduce activities of the LIBER RDM WG to the target audience as well as to find common and overlapping activities with other Working Groups. A total of 32 people registered for the workshop, and 27 people attended.

Background

The workshop in Amsterdam was directly linked to the [LIBER strategy 2023-2027](#) where one of the priorities is Upskilling the Library Workforce. According to LIBER strategy, by 2027, LIBER research libraries' staff will have the necessary knowledge, confidence, and skills to take on the organisational and technological changes. These new skills will enable research libraries to perform new roles and take on new responsibilities. In order to achieve these goals, LIBER as an organisation is helping libraries to build competencies in emerging areas of library services and operations related to the strategic priorities of engaged and trusted hubs, state-of-the-art services, and Open Science.

In addition to LIBER, others are actively working on professionalising data stewardship and developing career paths for data management professionals. E.g. [The RDA has a working group](#) focused on these topics. The EOSC strategy also strongly reflects the development of skills, training, and career paths of data management professionals. Thus EOSC has established a Task Force called [Data stewardship, curriculum and career paths](#). National working groups have also worked on the topic in different countries, producing good reports such as [Jetten et al 2021](#) or [Wildgaard et al 2020](#). The results of all these working groups show that more information management professionals will be needed in the future, and training for this purpose should be improved. Continuing education and training programs have begun in Europe. Among the first is a 15-credit international training for data stewards offered by the University of Vienna ([Kalová 2022](#)). However, significantly more training opportunities are needed for research data management professionals.





Workshop structure

The workshop consisted of two parts: presentations and group discussions. After the introductory presentation, a brainstorming session following 1-2-4-all structure took place. Participants were divided into five groups and were asked to think about the following questions: What are the skills that librarians need for data management support? What are the skills that we don't need to educate because librarians already have these skills? Look at the data management life cycle.

First, participants reflected on the questions on their own, then shared their answers with their partners, and then the duo shared them with another duo. In the end, the ideas from each table were collected on flipboard and shared with the entire group of participants.

After the group discussions, Mari Elisa Kuusiniemi from the University of Helsinki introduced the "National Roadmap for the Qualifications for RDM experts," which presented a Finnish roadmap on how to train professional RDM experts. The presentation was followed by a discussion of the following questions: What topics should be part of the RDM experts' curriculum? What kind of qualifications should this training have? Finally, we focused on LIBER as an organisation: How can these skills be developed into a LIBER training program? Which LIBER WG should be involved in training development?

Outcomes of the workshop

During the workshop, collaborative notes were available for all the participants. These can be found [here](#). The group discussion showed that it is important to distinguish between skills and knowledge.

In mapping out the skills that librarians already have and do not need to develop, it became clear that this depends heavily on the library. Some libraries are more advanced than others, which means that some libraries listed skills that do not need development while others listed the same skills as important skills that need to be developed.

The skills that librarians do not need because they are already advanced in them are:

- Pedagogical skills, soft skills (fundamental for engaging researchers to commit to or take an interest in data management);
- DMP support (generic) - DMP and DMP tools;
- Very friendly "service attitude": welcoming, open, trustworthy staff;
- Communication skills (oral and written communication skills);
- Promotion and advocacy;
- Finding help and finding out who can solve the problem;
- Metadata



Some basic skills that all librarians who are involved in Open Science should have are:

- An understanding of how research works;
- Being able to produce metadata and a data management plan;
- An understanding of FAIR principles, Open Science, research funding, and funders' regulations;
- Knowledge on each step of the data life cycle;
- Basic knowledge on data storage - repositories, archives, and preservation;

A more detailed list can be found under the map of skills below.

Map of skills

Based on the discussions, the workshop participants developed the following map of RDM skills for librarians.

We divided these into four major groups:

- 1) Soft skills** - need to be developed over time:
 - a) Communication skills - being able to clearly communicate Open Science related concepts and to communicate with researchers as well as publishers;
 - b) Advocacy and awareness-raising skills - being able to have difficult conversations - why Open Science and data sharing matter;
 - c) Adaptability - librarians as intermediaries between researchers and the changing Open Science landscape;
 - d) Project management skills;
 - e) Research funding and regulations from different organisations/agencies and the EU.
- 2) Disciplinary skills**
 - a) Metadata standards based on different disciplines;
 - b) Scientific knowledge;
 - c) discipline-centered skills - Not necessarily provided by librarians, but libraries could consider hiring people who can help researchers in detail;
 - d) Basic programming skills and literacy in order to convince researchers to document their specifically created programs, software, or tools.
- 3) Technical skills**
 - a) Data literacy for education;
 - b) Data quality and how to achieve it;
 - c) Data formats: metadata standards, PIDs, indexing, file management;
 - d) Data storage, ability to understand and communicate IT issues (not being an expert at the same time);
 - e) Multilingual indexing vocabularies for datasets description - training/culture of having metadata in a language that can be harvested;
 - f) Archival processes and techniques/data archive/ data repositories, knowledge about data storage and long-term preservation and data interoperability.



- 4) **Legal skills** - librarians should have basic knowledge of their local legislation regarding data management.
- a) Copyright, GDPR;
 - b) Ethical aspects in sharing and reusing data;

Recommendations for LIBER training

One of the main suggestions for LIBER when developing RDM training based on the workshop is: LIBER could offer training linked to the basics of the research life cycle - what is the librarian's role in different parts of the cycle, and what skills do the librarians need there?

- Legal aspects of data management, sharing, and reuse, GDPR;
- Soft skills around research data communication/advocacy;
- Core skills and knowledge of data management and data stewardship;
- Basics for the beginners - one session for different job positions in RDM;
- Advanced modules: dig into each part of the research data cycle + add tools they need to know about each part;
- LIBER should focus more on technical skills;
- Soft skills - LIBER could train librarians on what not to do and their advocacy and promotion skills;
- Library Carpentries - can be involved, including them as trainers. What are the differences between programmes (Carpentries, mantra, MOOC).

Conclusion

At the end of the workshop, it was agreed that the basic skills and knowledge that RDM librarians should have are:

- Knowing how to meet/teach the basic needs of the researchers;
- How to write a data management plan;
- What a researcher can and cannot do with the data;
- What is the legal framework, what is the landscape, and what are the risks.

Libraries need to think carefully about the type of service they want to provide and the specific skills needed to deliver it. In addition, libraries should prioritise demonstrating their expertise to others. This involves identifying ways to establish themselves as an authority in a particular area.



References

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