



# OPEN SCIENCE SKILLING AND TRAINING INITIATIVES IN EUROPE

## DENMARK

*Interview with Katrine Düring Davidsen, Aarhus University Library / Royal Library*

*Katrine is the project lead of a [DEFF project on Open Science skills in Danish Research Libraries](#).*

### How did your Open Science skilling initiative begin?

The starting point for our [project](#) arose simultaneously from two ideas. Firstly, we were increasingly recognizing the need to improve the skills of the library in supporting Digital Humanities and Data Management. Secondly, there was a call for new project ideas regarding digital literacy and open scholarship from DEFF (Denmark's Electronic Research Library). These two perspectives culminated in one project addressing skills within open science and data management altogether. This is an ambitious project, that has proven to be quite complex.

The library lacked a strategy defining which tasks we should address and which services we should offer supporting open science and data management. Consequently, the skills we needed to prioritize and learn were unclear. Some of the research libraries in Denmark are very proficient in these areas; they can not only help with data management planning, they can also teach about data management. Other libraries do not offer any services in that area. I think that this difference in capabilities across the library landscape in Denmark is a very important consideration. We are in very different places.

### When did the initiative start?

The project started in March 2018 and will run until March 2020.

### Please describe the context and aims of the initiative.

During the initiative, the project group members have the opportunity to learn new Open Science and digital literacy skills through peer-to-peer teaching and at the same time have an introduction to the didactic skills necessary to successfully teach these skills. This autumn, we will be offering a course in Open Science Skills for librarians, which will be open to all employees from the research libraries in Denmark.

### How is the initiative managed and coordinated?

There are 20 project members from six different research libraries in the initiative. We use Podio as a communication and project management platform. The steering committee is





made up of leaders from each of the involved institutions and the project chair is a leader from Aarhus University Library, Hanne Munch Kristiansen.

My role is the project lead, and I work closely with three coordinators, who are each responsible for different areas in the project.

The first, Jeannette Ekstrøm from the Technical University of Denmark, is responsible for the skills development working group.

The second, Ditte Laursen from the Royal Danish Library, is responsible for the digital collections working group. This group is primarily working with open data collections in the affiliated universities and finding out what the contents of these many collections contain, how we can (legally) work with them and consequently which skills we need to have – from basic stuff like what is an API and manipulation in Excel to more advanced skills in data cleaning, wrangling, analysis, visualization and mediation.

The third working group concerns research data management and is lead by Katrine Flindt Holmstrand from Technical University of Denmark. Even though these three groups are interdependent and complimentary, they did not work well within the framework of the project. We had difficulties with communication between the working groups and a huge lack of co-creation. We simply did not nurture collaboration well enough. As a result, we now focus less on the groups and more on the project deliverables. So we no longer talk about ‘what group are you in?’ but rather ‘what do we have to deliver together?’.

## Who are your target audiences?

Librarians and other library staff.

Members of the initiative were quick to point out that the skills included in this project are also needed in other libraries, for example in communal libraries, school libraries, college libraries or at a company’s library. Librarians supporting students from other educational institutions than universities would also want to attend these courses. We will try to accomodate them, but at this time the courses targets only staff at research libraries.

## Which skills are prioritised?

TOP PRIORITY	NOT A PRIORITY	OTHER
<ul style="list-style-type: none"><li>• FAIR Data</li><li>• Open Science Skills</li></ul>	<ul style="list-style-type: none"><li>• Metrics and rewards</li></ul>	<ul style="list-style-type: none"><li>• Soft skills and didactic skills needed to teach and communicate in TECH (carpentry pedagogy).</li><li>• Dissemination, access and use of (open) data &amp; digital collections, including digital literacy aspect.</li><li>• RDM and FAIR principles.</li></ul>

We are still identifying skills that we want to include in our recommendations.

## Why did you prioritise some skills and exclude others?

Our starting point is the open research ecosystem, which represents the lifecycle of research. We have operationalized the ecosystem as a fowchart and simplified it, by dividing it into three phases. One is planning, one is active, and one is publishing.



Within these three phases, we have defined different activities, such as searching for data or information (phase 1 or 2), and writing data management plans (phase 1) and finding the right data license (phase 3). There are many processes within the research lifecycle and the same process can be both sequential and iterative.

Our aim is to figure out what kind of skills you need in order to know about how the library can support these processes, to show the information you need to work with these processes or to have the skills to do these processes. In our initiative we are working with three different levels of competence or skills development, ranging from basic skills to expert skills.

One of our findings is that not all skill levels are relevant for everybody working at the library. The know part would be relevant, for example, for people at the library's information counter, for whom it would be relevant to at least know about how the library can support the research lifecycle. Being able to show knowledge of library support could include providing information about recommended tools that the Open Science practitioner can engage with. Finally, the do part is the ability to actually use or instruct in for example research management tools that support open science practices. When combined with our levels of competencies, I think we'll find a lot of possibilities for providing instruction, teaching and support, especially in the show and do part.

### How do participants acquire these skills?

We have had a couple workshops in Open Science and Digital Literacy for members of the project. We have done a few train-the-trainers sessions. Some of these have built on the skills that our project members already have. During the project, we have become more and more aware of the need to pay attention to our didactic and pedagogic skills when it comes to teaching and communicating topics like data and tech.

In the autumn we will be offering a course that transpires different topics from the original three working groups (open science skills, data literacy and data management). This will be open to all – project members, library staff and other participants. We are considering a pilot test, where we run the course for the project group first and then after an evaluation and revision, for library staff and other participants. The three topics will be library carpentry and the soft skills that you need for successful and impactful teaching; digital literacy and what you need to know when you work with data, and finally data management.

### Which channels, learning types and formats are used?

Not yet decided, but it will be a combination of several.

### Is there formal recognition?

No.

### What impact do you expect from this initiative?

A better and more qualified research support in the Danish research libraries.

### How do you train the trainers?

Our train the trainer workshops involve external specialists. In two workshops people from [FOSTER](#) were invited to steer different sessions. Jeroen Bosman and Bianca Kramer



from Utrecht had a train-the-trainer with us on Open Science skills, and last week we were lucky to have Helene Brinken teaching us about how to plan lessons, identify learning objectives and conduct interactive training in open science skills and practices.

### What have you learnt so far?

As the project moved forward we learned that we need to have special focus on the skills of the teacher, when it comes to teaching and communicating when it comes to subjects like data and tech.

### What's next on your skilling/training calendar?

The three workshops we are developing in soft skills, digital literacy and data management will run this fall. They may be repeated next spring.

### What about the budget and the costs?

DEFF has invested 3 million Danish kroner (about €400,000) in the initiative. We are also partially self-financed. All of the member libraries pay staff hours for some of the activities. As a result, the project budget is actually a bit more, about 4 million Danish kroner (approximately €535,000).

We have not used all the money yet! We have a pool of money we have used on conferences and posters, and another for workshops. Therefore, we have budgeted for the last course and inviting experts to come in to the course to instruct and inspire.

We also have four external advisors who are funded differently from the rest of the initiative. How we use their expertise is up to us. Two of them originally held an advisory role but were actually so interested in the project they decided to join (even though they are not officially recognized as "project members"). We will bring in a fifth expert at the end of the year to do the evaluation of the final course. His or her role will be to assess if our intentions with the course were met, the expectations of the participants were met and if the course actually worked. It would be interesting to find out if the participant actually went back and did something with the knowledge they gained through the course. How we will evaluate the impact of the course is yet to be decided.

### Which challenges have you encountered?

This initiative has been plagued with changes in leadership and membership. I am the second project leader and we are on our third chair of the steering committee. Within the project groups we have also had a lot of disruption. Members have come and gone and their skills that have benefited the group have likewise disappeared from or been added to our portfolio. This has been a huge challenge, because every time we thought we had completed something, we had to start over again. The direction of the work packages changed as people came and went from the initiative. This was not the best starting point for a project but I think now, nearly a year later, we are about to reap the fruits of all our hard work. The first year has been very difficult.

Another challenge was at the beginning of the initiative. We had three different working groups that functioned as independent tracks, where every track made their own little project with their own objectives. There was little or no communication between the groups. We have unified the direction of the working groups now engaging in deliverables instead of the "tracks" and this approach has improved communication as well. Now we



have well-defined deliverables that people from different working groups can join on a voluntary basis based on their interests, strengths and strategic benefits for the project.

### What would you tell others looking to do a similar program?

Have well defined objectives from the project start. Our initiative is very broad, in retrospect we should have narrowed it down. That way we would not have set ourselves the task of grasping the whole research lifecycle, but instead focus only on a part of it. Only focusing on data management or digital literacy would have provided a wealth of information and possibilities for analysis and skills development. It was very ambitious, and proved to be very complex, to aim to cover all of the research lifecycle and all the processes within and all of the potential stages libraries could offer support.

### Has your initiative had an impact so far?

Yes! The project members are working as ambassadors for the initiative and showcasing their skills back at their home institutions and libraries. I just heard today that one of my project members held a small course on how to access open data collections using APIs at her library.

Another example is the feedback we are getting from the community surrounding data management and open science. We presented a poster at the DI4R conference in Portugal last year. We received some really useful feedback that has formed the direction of our project deliverables and showed the importance of our initiative.

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*For more case studies, and the original version of this one, please see: <https://doi.org/10.5281/zenodo.3251731>*

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