

Using Active Learning Classrooms in Building an Infrastructure for Access to Research Data

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Background

An infrastructure for managing, storing, and providing access to research data is a central part of the work towards Open Science in Sweden. As a vital component of this infrastructure, Swedish universities are establishing local functions for supporting researchers with data access and management (Data Access Units, DAUs). Together with the Swedish National Data Service, DAUs from 28 universities are building a national network in order to provide the best possible data access and management support.

Achieving the objectives

1. Developing data management skills

Participants found that they developed data management skills through ALC exercises focused on cases. They thought these skills would be directly applicable to their work in the DAU.

Example: Writing a data management plan (DMP). Groups of participants were presented with an outline of a study and given the DMP instructions from an actual funding call (NordForsk 2017). They were then asked to write a DMP for the study, swap with another group, and suggest ways to improve the other DMP.

Example: Anonymising data. Before the meeting, participants listened to an interview with a data manager on how this is done at SND. At the meeting, they were asked to work in groups to anonymise a dataset of survey data and then present their work to the entire class.

The combination of studying material in advance and then be required to put the information to use in group work proved to be an efficient way of identifying how the new information could be applied to actual situations, thus preparing participants for potential future work.

“ Above all, the course gave a context to what we have learnt. You can read up on much, but to actually work with case-like exercises has been very rewarding.



The course

To assist in establishing DAUs and strengthening the network, the University of Borås in collaboration with the Swedish National Data Service offer a joint professional development course to DAU staff. This course ran for the first time in spring 2018, with 21 participants from 12 universities.

The course has three main objectives:

1. to develop participants' data management skills and ability to support researchers in making data FAIR
2. to increase participants' understanding of the institutional conditions for providing access to research data
3. to strengthen the national network through interpersonal connections and collegial ties.

2. Institutional conditions

Task design and perceived relevance of a topic were important for how participants engaged with various aspects of tasks concerning institutional conditions necessary for data access.

Example: Legal frameworks for research data. Participants collected questions related to legal issues that came up at various stages in the course. For the legal frameworks task, some of these questions were selected and participants worked in groups to answer the questions and to identify where more information was needed. They then presented their results to the other groups and to a lawyer, who commented on their answers.

Example: To structure the work in a DAU. Participants prepared short presentations of the DAU work at their own university. They were asked to include a reflection on present and future structures of the DAU based on the OAIS model and the FAIR principles. The presentations generated intense discussions and comparison of DAU challenges and achievements, as well as varying institutional conditions.

Tasks relating to issues of acute concern to many DAUs allowed participants to learn in various ways. They articulated their own experiences and expertise, received feedback, and encountered new perspectives from other participants, course leaders, and participating specialists.

“ We discuss relevant questions in a group and get feedback from teachers. The legal framework [task] was really good. We created questions, discussed with each other, and finally got feedback from an expert. I think that's a good design.

Active Learning Classroom

In order to promote collaboration between participants and to take advantage of their various types and levels of expertise and experience, Active Learning Classroom (ALC) methodology is used during four physical meetings. Participants work actively in groups with instructor-facilitated tasks. The ALC work is combined with significant use of collaborative work between meetings.



3. Strengthening of the DAU network

A clear outcome of the course was a strengthening of the DAU network. Participants gained a sense of collegiality by working in different constellations during various ALC tasks. The social activities included in the course also allowed classroom discussions to flow into more informal spaces.

Example: Changing group constellations. Different group designs were used to get participants to work in new constellations. Groups changed between tasks, but also within tasks. For instance, a new group could be formed with one member from each of five previous groups. This allowed results from the previous groups to be disseminated to participants in the new groups.

Example: Social activities. Each meeting included having dinner and lunch together. This allowed participants to get better acquainted in a social setting and to share experiences from their work with developing their DAU.

By working and spending social time together, the participants have got to know each other better, making future collaborations and mutual help within the DAU network easier and more likely.

“ We've worked together so much now that the insecurity that I felt was there during the first meeting has disappeared. Instead, our respect for each other's different knowledge has grown and I think we will be able to support each other in the future.

