Collaboration is Key: Teaching Research Data Literacy Skills at NTNU

Handout to the poster by
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The field of data management arose decades ago, while publishing and archiving research data as an essential part of most research projects came into focus much later. Academic libraries soon became involved in and responsible for Research Data Management (RDM) services as they are experts in planning, collecting, storing, sharing, and preserving data. Good practices of managing research data require the need for teaching and training researchers and students, ensuring that they have the skills to properly manage their research data throughout the entire research life cycle. These skills are usually called research data literacy skills, and (research) data literacy is seen as a “sub-discipline of information literacy” (Schneider, 2013). Many stakeholders have identified the libraries as a key place to provide teaching and support for RDM, given that they already give information literacy instructions to students and researchers.

The Norwegian University of Science and Technology (NTNU) started focusing on Research Data Management several years ago. In 2020, a Policy for Open Science at NTNU, including principles for RDM, was approved (NTNU, 2020). The university library got the main responsibility to support and train students and researchers in managing their research data in a secure and responsible way. Since then, work is organised via a central service called Research Data @NTNU and conducted in close collaboration with the university’s IT department, research administration, lawyers, as well as with other libraries in the Nordic countries. You find more information on Research Data @NTNU at [https://i.ntnu.no/researchdata](https://i.ntnu.no/researchdata).

The poster illustrates the various activities at NTNU to foster research data literacy among students and researchers.

It shows **WHY** we need to offer RDM services:
NTNU’s Open Science policy requires RDM and all research projects at our university should develop a Data Management Plan.

It also illustrates whom the library is collaborating **WITH**: the IT department, pro-rector for research and dissemination, the Research, Innovation and External Relations Division, and national and international partners and networks. Among others, we are involved in and collaborate with Norway's Reproducibility Network (NORRN) that aims to promote and enable rigorous, robust and transparent research practices in Norway. In addition, we are an active member of the Research Data Alliance (RDA) in Norway.

The poster presents the target groups for our research data literacy teaching (**WHO**), namely researchers, PhD candidates, master and bachelor students, and research administrators.

In addition, it showcases **WHERE** we do teach, meaning in which forums. Colleagues from the library are included in teaching activities like PhD courses and introduction courses for master students, but they are also invited to tailored seminars or workshops at university departments, or they teach at research group meetings and other events for PhD and master programmes.
NTNU UNIVERSITY LIBRARY

How to foster a culture of data management and sharing

**TEACHING RESEARCH DATA MANAGEMENT SKILLS AT NTNU**

**WHY**
- NTNUs Open Science policy requires research data management (RDM)
- All research projects should develop a Data Management Plan (DMP)
- RDM is part of Information Literacy teaching

**WHAT**
- Introduction to RDM
- DMP in 1-2-3
- Personal data and ethics
- Open Science and RDM
- FAIR data

**WHO**
- Researchers
- PhD candidates
- Master students
- Bachelor students
- Research administrators

**WHERE**
- PhD courses
- Introduction for master students
- Department meetings
- Other staff meetings

**HOW**
- Physical courses
- Online courses (live or self-paced)
- Guidance
- Informative wiki articles

**WITH**
- IT department
- Pro-rector for research and dissemination
- Research, innovation and External Relations Division
- Subject librarians
- National and international partners

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In autumn 2023 and spring 2024, we intend to visit all departments at NTNU and talk about Open Science and RDM. The teaching is conducted as physical courses, live webinars or self-paced online courses (HOW). There are lectures, seminars or workshops, depending on the demands from the target groups. Sometimes there is only time for a short introduction, at other times we can give a longer lecture, including exercises. For instance, when we conduct workshops on how to write a data management plan (DMP), there is a shorter introduction, followed by writing your own DMP and practising the tools for that. All students and staff also have access to informative NTNU Wiki articles, and they can get individual guidance if desired. In addition, we regularly offer courses in our Virtual Library and those are open for all students and staff at NTNU. Last but not least, the poster shows **WHAT** specific topics we teach. These are some examples for our training courses:

- Open science for researchers at NTNU
- DMP in 1-2-3: An introduction to data management plans for researchers
- Research Data Management and Open Science
- Archiving and Publishing FAIR Research Data
- Data Management Plan (DMP) with personal data
- Personal data in research projects

New courses will be developed in the future. If you have further questions, do not hesitate to contact me.

**References**

NTNU (2020). Policy for Open Science at NTNU. Retrieved February 14, 2023 from [https://www.ntnu.edu/policy-for-open-science](https://www.ntnu.edu/policy-for-open-science)