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Competency Framework for research data services in Norwegian libraries

Background

"Competence Framework for Research Data Management in Norwegian Academic Libraries" was a one-year project (autumn 2021 – autumn 2022) (Bibliotekutvikling, 2021) run by the Norwegian node in the Research Data Alliance (RDA-NO) and financed by the National Library of Norway. The purpose of the project was to obtain a concise overview of the competence needs for research data management which was adapted to the Norwegian higher education sector.

Through a literature review and a workshop in January 2022 we uncovered several needs for competence development in research data management as a field se Kvale et a (2022).

Findings

The libraries act as important contact points at the higher education institutions. This requires a broad network and good knowledge in several areas as illustrated in the figure below. It is often necessary that librarians have both broad konwledge of multiple areas and deep expertise in one or two areas. Here we mean that both general research support knowledge as well as specialized skills in a given research field are necessary for research data management support. Thus, proximity to research is critical for providing services that reflect the needs of researchers. The field of data stewardship is developing rapidly. Participation in collaborations and national and international networks are therefore important for competence development and keeping up to date.

Conclusion

In our recommendations, we emphasize the value of investing in double expertise (i.e., expertise in more than one of the competency areas in the framework) and interdisciplinary collaboration. Because building competence in data stewardship is time consuming, it is important that the competence is maintained and further developed through permanent positions and stability in the organisations. Local lead and national cooperation and coordination are also important to avoid unnecessary bureaucratization. We therefore encourage establishing the structures for knowledge exchange within various areas of expertise at national level and with RDA-Norway as the coordinator for such networks.

Recommendations

For libraries:

- 1. See research data management as a central focus area in the work with open research and research quality.
- 2. Map the competence internally in the organizations based on the six competence areas described in the framework (see Figure: Competency Framework for research data services).
- 3. Invest in continuing education, recruitment, and collaboration to build expertise in the areas that are not currently covered.
- 4. Invest in subject area knowledge and research experience to build up dual expertise in the subject area and data handling, respectively.
- 5. Further develop existing knowledge within subject areas, collection management and metadata in the work with data management.
- 6. Act as contact point for data managers who work in the professional environment.
- 7. Piloting models for data steward positions coordinated by the library based on models from pioneering institutions in the field.
- 8. Bring in external funding for development of projects that will increase knowledge about data management.
- 9. Stakeholder support for responsibility for data management locally at the research libraries and collaborate nationally.
- Participate in international networks and contribute to developments in the field.

For educations of data stewards

- 1. Establish study subjects based on the competence areas in the framework in regular education programmes.
- 2. Establish offers for further and advanced training based on the six competence areas described in the framework.
- 3. Coordinate education programmes with courses and certification work from other actors nationally and internationally

Personal skills

Exploratory

Network builder Independent Cooperation Organized Patient Ability to listen Learning from others

Professional updates



Policy development Strategy development Stakeholder support Project management Highlight needs Apply for funding Implementation of policy

Ethics & Law

Copyright Licensing Intellectual property rights Privacy and GDPR Research ethics The Health Research Act Contract law

Mediation

Pedagogy

Instruction Presentation Communication Culture change Instruction in guidelines Disclosure of policy Create space for learning

Programming skills

Data visualization

Operation and

maintenance of

infrastructure

IT security

Software knowledge

System understanding

Data management

Data stewardship experience Metadata Ontologies Curation Long-term perspective Documentation

Persistent Identifiers Cultural heritage perspective

Domain knowledge Technical skills

Research experience Research methods Experience in curation Training and Guidance Terminology Translate between different subjects

Figure Competency Framework for research data services

References:

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