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Training research data management experts

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With digitalisation, the role of data management has become more pronounced, which has increased the demand for research data management (RDM) experts across various sectors. RDM experts' tasks are versatile and require extensive special expertise. Success in data management requires strong expertise in data management planning, data protection, information security, data documentation, sharing, publishing and archiving.

Working as a data management expert requires, among other things, the ability to perceive the data management needs of different research or project and develop sustainable and responsible practices for their implementation. The role of a data management expert is broad in advising different stakeholders and enabling research: data protection and data security require an in-depth understanding not only of current regulations but also of best practices in the field. Data management skills are also an essential part of research skills, knowledge-based decision-making and continuous learning in research organisations.

So far, Finland has completely lacked training aimed at the professional qualification of experts in the RDM field. So far, self-taught RDM experts have trained newcomers while fulfilling their everyday working roles in research organisations.

The Professionalisation of RDM Experts Working Group, which worked under the national Open Science and Research Coordination (AVOTT) during 2022–2024, addressed the lack of a formal education path by proposing a framework for a specialised training programme in Finland. The proposed training programme, consisting of a modular curriculum, aims to provide systematic high-quality education catering to the needs of various sectors, including research organisations, public administration, and companies.

One crucial task the working group had was to find an organiser and start-up funding for the training. As a result of the working group's work, the Tampere University was selected the organiser of the training. Tampere University Library and Continuous Learning Services joined forces and applied funding from the Ministry of Education and Culture. At the beginning of the year 2024 a three-year special funding for the promotion of science from the Ministry of Education and Culture was received for the Tampere University project "Planning and implementation of training professionalising data management specialists".

The purpose of the project is to create training for the profession of data management experts/data stewards and to secure the availability of data management experts in different sectors. Tampere University is responsible for the project. However, the planning of the contents of the education now being developed requires continuous extensive national, international, and cross-border cooperation. There is close cooperation with, for example, the CSC's IT Center for Science and the Finnish Social Science Data Archive (FSD). In addition, an

advisory board of nine research data experts, each representing different organisations, was formed in order to guarantee the needed broad and tight national co-operation.

The scope of this further training will be 15 ECTSs, and the target group will include doctoral students and postdoctoral researchers as well as people who already work in different organisations in data management tasks under different titles. The training is going to start in March 2025, and it takes one year to complete it alongside work. The same training will be repeated March 2026–February 2027. The training is open not only for participants from Finland, but also from all over the world.

The project coordination team does not have to start planning the training from scratch, as the working group (The Professionalisation of RDM Experts) carried out an extensive study of existing educational resources and reference materials on the skills and competencies necessary for RDM professionals.

The training encourages participants to relate the content to their existing knowledge, which promotes the seamless integration of new skills.

Training programme consists of 5 modules:

1. Introduction to research data management and open science,
2. Introduction IT and Data Science,
3. Research Data Management Life Cycle,
4. Research Data Management Support and
5. Data stewardship in practice: project work.

By the end of this training the learners will be able to define research data management, understand its importance in the research process and identify challenges and best practices in research data management, following FAIR principles, and open science. The learners will also understand the role of data stewards and other data support personnel in research organisations. The aim of the training is also to help participants to recognise and develop the so-called soft skills needed to help others with RDM. This includes pedagogical approaches, problem solving in customer service, recognising and formulating information needs.

Training data management experts also accelerates the development of data management practices and strengthen the quality and impact of research data infrastructure practices. The development of training responds to the growing need to ensure that those working in the field of data management have a strong theoretical foundation and practical skills. This promotes not only the career development of individual professionals, but also

Finland's position as one of the leading countries in data management. The project also aims to promote the inclusion of data management skills as part of doctoral degree programs and to find more solid home for this kind of further education to other training programmes suitable.

In the presentation the main focus is firstly, on reflecting the content of the training and secondly, how to ensure the needed continuous training.

References

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