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At the LIBER 2020 Annual Conference, FAIRsFAIR and the LIBER Digital Skills for Library Staff & Researchers Working Group organised a workshop to discuss the role of academic and research libraries in assimilating the FAIR principles into higher education curricula. Lessons learned from the participants further enriched the findings from a recent FAIRsFAIR survey into the state of FAIR in this field - report by Claudia Engelhardt of FAIRsFAIR partner Göttingen State and University Library.

FAIRSFAIR FINDINGS

Our point of departure for the workshop was to present the findings from FAIRsFAIR survey activities conducted by the European University Association (EUA) in collaboration with partners of the FAIRsFAIR project during 2019 to investigate the extent to which FAIR research data management principles are present in university curricula. These findings and the related recommendations are documented in the recently published report D7.1 FAIR in Higher Education. For easy reference, a quick graphic overview of the report is provided at this webpage.

The findings most pertinent to workshop participants include:

- Awareness of the FAIR principles is considered high among professional and support staff (e.g. data stewards, librarians), moderate among the institutional leadership, but still rather low among researchers and especially students.
- Higher education institutions are increasingly aware of the need to integrate digital skills into their curricula. Only 38% of respondents to this question stated that their organisation had a related strategy in place at institutional or departmental level - or both. However 31% stated that although there was no strategy yet in place, their institution was developing one.
- The extent to which data science skills are currently being addressed in university teaching is reported to be rather low overall at the bachelor and master level and moderate at the doctoral level. Respondents expressed an urgent need to strengthen the teaching of data-related competences at all three levels.

CASE STUDY FINDINGS

The LIBER Digital Skills working group facilitated a panel of four speakers who presented use cases. The presentations and the discussion which followed gave us new insights into institutional and national approaches to FAIR data education and training from the perspective of libraries and library personnel.

Couperin.org, France

Couperin.org — the Unified Consortium of University and Research Institutions for Access to Digital Publications — has more than 250 member institutions from all over France. Romain Féret described the association’s efforts to support the implementation of Open Science practices through project management by providing specific guidance, training and support for project coordinators as well as consortia. He believes that a stronger involvement in project management activities could open new perspectives for libraries and encourages a more active development of this role through cooperation with related support units, such as grant offices and IT departments, contributing their specific expertise in all stages of a project and providing training and individual support for research...
École Polytechnique Fédérale de Lausanne, Switzerland

Mathilde Panes and Eliane Blumer from EPFL — École Polytechnique Fédérale de Lausanne, Switzerland — reported on the institutional strategy of the EPFL Library regarding the integration of FAIR data competences. They identified a number of gaps and challenges in this respect — for example that existing library courses on the topic are considered too generic, that there is a lack of incentives for FAIR, and that infrastructure is missing. They also said that while libraries currently are mainly assuming the role(s) of coordinators, facilitators, trainers and experts, they would like to see them use their specific expertise to develop ways to assess and certify the FAIR-related competencies of students and researchers in the future.

Open Science Platform, Poland

Natalia Gruenpeter from the Interdisciplinary Centre for Mathematical and Computational Modelling at the University of Warsaw, and OpenAIRE NOAD, Poland gave a brief overview of the state of the art with regard to Open Science in Poland and shared lessons learned from trainings conducted by the Open Science Platform (PON) in cooperation with libraries. These can help to identify the main aspects of the role of research and academic libraries with respect to FAIR data education and training. One of the main tasks of libraries in this field is to provide information and create awareness as well as to teach practical skills. In order to promote FAIR data, a strong focus should be put on the benefits of FAIR, for example by stressing its positive effects on data discoverability.

University of Turku, Finland

The fourth use case, prepared by Päivi Kanerva but not presented due to technical difficulties, concerned the University of Turku, Finland. In the university’s data policy, the role of the library is described as helping, supporting, teaching and guiding researchers and other staff in order to enable them to manage their data in the FAIRest way possible. This includes raising awareness, advising and supporting researchers directly as well as coordinating between and cooperating with all relevant experts and partners such as IT, legal, and ethics. The library has developed a course on the Basics of Research Data Management (BRDM) targeting doctoral students and post-doc researchers in Health Sciences, Natural Sciences and Survey and Interview Studies.

DISCUSSION SESSION

In the discussion session following the presentations, Mentimeter was used to gather information from the participants around three key topics:

- The role of research and academic libraries in supporting FAIR data education and training
- Common gaps and challenges for developing an action plan for FAIR data competences in higher education curricula
- The key elements of an institutional strategy to integrate FAIR data competences into curricula

The role of research and academic libraries in supporting FAIR data education and training
A clear majority of participants confirmed that their library played a role in implementing the FAIR data principles in an Open Science context.

When asked whether their institute provided dedicated training addressing FAIR competencies, 23 of the 56 participants responded in the affirmative, 19 stated “not yet, but already planned” and 15 replied “no”.

An open-ended question regarding the elements of the role of libraries that participants deemed most relevant in terms of supporting FAIR data education and training yielded a variety of answers, reflecting the broad scope of the perceived area of responsibilities. (See link below to detailed Mentimeter results). Advocating and spreading a culture of openness was identified as a general task of libraries in this regard, encompassing a number of facets including the provision of infrastructure, support and training. Important aspects to consider in terms of training and education included giving trainees the time and space to discuss the content with researchers from other subject areas, and making sure that training was fun. Also mentioned was the importance of a focus on practical aspects such as how to use a repository or other services.

**Common gaps and challenges for developing an action plan for FAIR data competences in higher education curricula**

Responses in this regard can be grouped into clusters:

- Lack of institutional support & buy-in from management
- Heterogeneity of the target audience (different levels of knowledge and interest, differences between domains/disciplines)
- Research culture (lack of awareness, RDM and FAIR not regarded as integral part of research, lack of openness)
- Missing link to curriculum planners

Other aspects mentioned included a lack of knowledge about FAIR and RDM among teachers, the challenge to stay continuously up to date with new developments, and a lack of infrastructure, making it difficult for learners to get hands-on experience.

**The key elements of an institutional strategy to integrate FAIR data competences into curricula**

Regarding policies relating to RDM and FAIR data, 14 participants stated that their organisation had an institutional policy, 4 confirmed that there was a policy on the department or faculty level, 12 indicated that there was a policy under development and 9 said that there were no policies.

Key policy elements mentioned included data management plans, secure data storage, preservation of relevant data for at least 5 years, ownership and responsibility, mandatory dataset registration in the institutional information system, recommendations to follow best practice guidelines such as the FAIR principles, and the provision of RDM support and training.

Interestingly, while the concept of FAIR is relatively young, the degree of policy take-up is considerable. And where FAIR principles are not yet included in institutional policy, there is a
recognition of the need to provide FAIR support in order to comply with the requirements of external parties such as funders.

Finally, the attendees were asked to prioritise a number of FAIRsFAIR recommendations related to policies and support (0 = low priority to 5 = high priority):

- Involve all relevant stakeholders in policy developments and support (4.3)
- Align policies, including DMPs, with funders’ requirements (4.1)
- Consider training/hiring and working on establishing career paths for data stewardship and long-term funding (4.1)
- Establish (decentralised) support (3.3)
- Increasing FAIR requirements over time without causing unnecessary confusion for researchers (3.2)

Click here for the video recording of the workshop.
Click here to view the workshop slides and Mentimeter results

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