Practical challenges for researchers in data sharing: disciplinary and regional differences

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Abstract:
In 2018 the publisher Springer Nature published a survey of researchers which received more than 7,700 responses (Stuart et al., 2018; https://doi.org/10.6084/m9.figshare.5975011.v1). The aim of this survey was to identify the practical challenges faced by researchers in sharing their data, as well as any differences between researchers at different stages of their careers; in different geographic locations; or working in different subject areas. This presentation focuses on the practices and perspectives reported by researchers working in specific disciplines, and how different regions approach data sharing.

Overall, 76% of surveyed researchers stated that the discoverability of their data was important to them. In spite of this, researchers also reported common challenges in sharing their data, including difficulties in organising their data in a useful way (46%); not being sure about licensing and copyright (37%) and not knowing which repository was appropriate for their data (33%).

In analysing the survey results, disciplinary differences were apparent, with biological science researchers reporting the highest levels of data sharing (75%) compared to earth scientists, medical scientists and physical scientists. However in spite of the existence of community repositories for biological and medical data, only 54% were aware of applicable funder or community mandates around data sharing.

Regionally other differences were also expressed, with respondents in Asia and South America reporting a higher level of data sharing than those in Europe, North America, and Australasia. In terms of the challenges of data sharing, there appears to be a trade-off between time and money. Time was reported to be a bigger barrier for respondents from Australasia, North America and Europe (with up to 28% of researchers citing this as a barrier) when compared to South America and Asia (where as few as 20% cited it). Cost was perceived as a bigger barrier in South America and Asia (where up to 25% of researchers cited it as a barrier) in comparison to Australasia, North America and Europe (where as few as 17% cited it).

Related:
Full survey dataset (CC-BY 4.0): https://doi.org/10.6084/m9.figshare.5971387; Whitepaper based on the results of this survey (CC-BY 4.0): https://doi.org/10.6084/m9.figshare.5975011

Survey respondents

Breakdown by subject and region:

- Biological sciences
- Medical sciences
- Physical sciences
- Earth sciences
- Other sciences

Regionally differences in the challenges of sharing data

How different disciplines share their data

- Repository
- Supplementary
- Both
- Neither

Data sharing methods by region

- Australasia
- North America
- Europe
- South America
- Asia

Proportion of respondents by region

- Lack of time to deposit data
- Organising data in a presentable and useful way
- Not knowing which repository to use
- Unsure about copyright and licensing
- Costs of sharing data
- Other