



Researchers, research institutions and organisations ensure access to data is as open as possible and as closed as necessary.
(cf. ECoC 2017, p. 6)

Description and background

This learning unit:

- Introduces (future) researchers to norms of proper data management*
- Builds the competency to explain and justify proper data management*
- Challenges (future) researchers to choose practices that respects the rights of others as well as support their own work*
- Emphasises the principles of findable, accessible, interoperable and re-usable (FAIR) data while describing their limitations*

This unit has been prepared for disciplinary learning groups.



An advocate for research integrity

Tymon Zieliński

Keywords

Data management; FAIR; open science; informed consent

Learning objectives

- 1 Be open, unbiased and accepting of ambiguity*
- 2 Explain and justify arguments for proper data management*
- 3 Compare and prioritise different handlings of proper data management*
- 4 Be ready to choose norms together with the dialogue group and for your target group*

Learning stages

- 1 Become familiar with the topic*
- 2 Choose an interesting challenge*
- 3 Engage in role play*
- 4 Explain and justify data management*
- 5 Evaluate different arguments, face dissent and achieve consensus*

“Reliable data must first be collected, then processed accurately in order to draw reliable conclusions and present them fairly.”
(Tymon Zieliński, an advocate for research integrity)





1 Become familiar with the topic:

Homework (before the unit starts) or reading session

Read chapter 2.5 of “The European Code of Conduct for Research Integrity” and

Wilkinson M, Dumontier M, Aalbersberg I, Appleton G, Axton M, Baak A, ..., Mons B (2016): The FAIR Guiding Principles for scientific data management and stewardship. In: *Scientific Data*, 3:160018. <https://doi.org/10.1038/sdata.2016.18>

FAIR Principles:

Research data and related meta-data should be findable, accessible, interoperable and re-usable (FAIR), unless legal obligations dictate otherwise. Research data are the data on which findings and arguments are based. Meta-data are data describing other data.

GoFAIR Website: www.go-fair.org



2 Choose an interesting challenge:

A researcher has come across an interesting journal article that is underpinned by data that could be relevant for her own new research project. According to a statement at the end of the article, “The datasets generated and analysed during the current study are available from the corresponding author on reasonable request.”

She decides to contact the corresponding author to request access to the data, outlining how she plans to use them. As her research project has just started, some questions are still open and will only be settled once the project has progressed further. A few days later she receives this reply: “Unfortunately I cannot follow your request. Because you cannot specify precisely what you will do with the data, the request is unfounded and, therefore, unreasonable.” This answer leaves the researcher wondering: “What then is a reasonable request? Of course, I cannot tell in every detail what I will do with the data, what insights the analysis might generate and so on. Research is open-ended and risky, after all.”

If this challenge is relevant to your discipline, you can use it in the following exercise. If not, please select an equivalent challenge from your discipline. Equivalent challenges may, inter alia, relate to questions on where to store data, how to describe data, whether or not to retain data, whether or not to make data publicly accessible, or choosing meta-data standards and file-formats. The selected challenges should clearly relate to the FAIR principles.



3 Engage in role play:

Go through the next steps in groups of four to six people:

Flesh out your challenge with details

Imagine a conflict happens between different parties in which the FAIR principles can be invoked.

Perform the challenge in a roleplay.

Describe the conflict and write it down (each group member needs a text version).

4 Explain and justify data management:

Reflect alone and answer the following questions:

Which rules do the parties implicitly reference in your conflict?

Did the parties explain the rules in the role-play?

If not, can you imagine which rules justify the actions of each of the two parties?

Which rules conflict? Which rule(s) should take precedence? Why?

5 Evaluate different arguments, face dissent and achieve consensus:

Discuss in class, why you have decided to award priority to the rule you have chosen to follow.

Explain why you disagree with alternative courses of action.

Is it because you disagree with other rules or because you have ranked the rules according to their relative importance?

