Teaching Open Science

- Who shall be target groups?
  - Bachelor … Master … PhD students?
  - Data stewards?
  - Senior researchers?
- What shall they learn?
  - A pool of broad competencies?
  - Specific skills for a project?
- When is this benificial?
- How can you reach them?

PhDs & PostDocs **1**

Policies, Tools, Methods, Standards, …

→ regular face-to-face training
→ supportive online material
→ helpdesk

Bachelor Students **2**

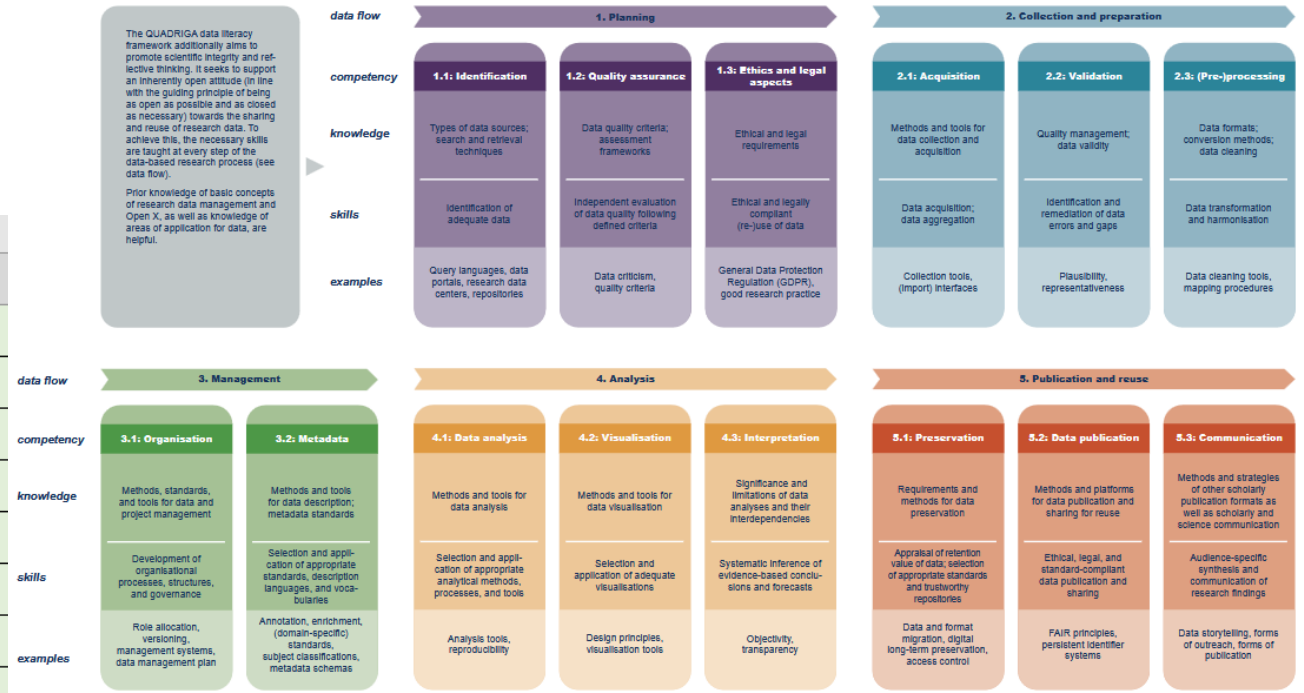
Culture of Reuse, Practices, Formats, …

→ lecture series
→ hands-on exercises
→ practical projects

Data Literacy

F	G	H					
Start Learning Objective	Learning Objective Verb	Content Learning Objective					
Learners are able to	explain	research data management (RDM) issues.					
Learners are able to	analyse	research data management (RDM) issues.					
Learners are able to	evaluate	research data management (RDM) issues.					
Learners are able to	differentiate	between general and (subject) specific problems in the field of research data management (RDM).					
Learners are able to	name	solution strategies for problems in the area of research data management (RDM).					
Learners are able to	explain	solution strategies for problems in the area of research data management (RDM).					
Learners are able to	apply	solution strategies for problems in the area of research data management (RDM).					
Learners are able to	evaluate	solution strategies for problems in the area of research data management (RDM).					
Learners are able to	design	sustainable solution strategies for problems in the area of research data management (RDM).	6				x
Learners are able to	design	didactic scenarios on problems in research data management (RDM).	6				x
Learners are able to	carry out	didactic scenarios on problems in research data management (RDM).	3				x

RDM Learning Objectives Matrix
https://doi.org/10.5281/zenodo.15846806



QUADRIGA Data Literacy Framework
https://doi.org/10.5281/zenodo.19470557

… and many more

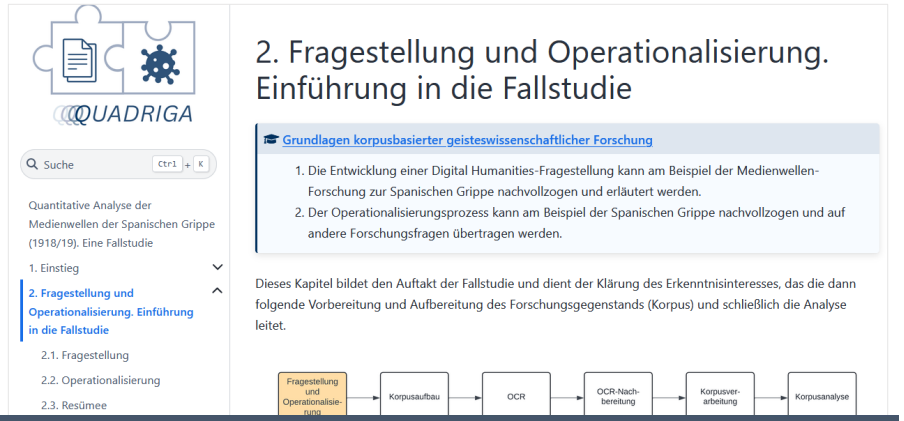
Open Educational Resources

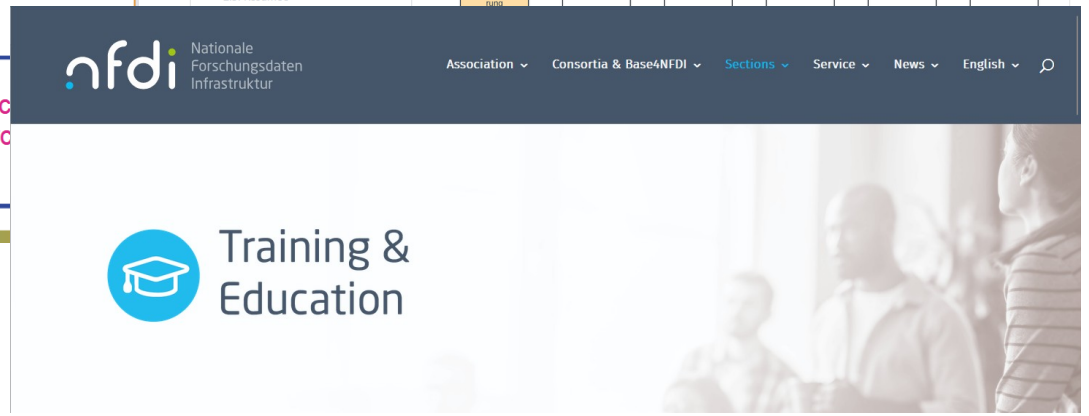
Train-the-Trainer Concept on RDM https://doi.org/10.5281/zenodo.10122153



LEGO™ Reproducibility https://doi.org/10.5282/o-bib/6070

QUADRIGA Case Studies https://github.com/quadriga-dk





Conclusions

- There is a strong need for training and education in the use of digital data and methods across all disciplines – including the traditional book sciences.
- Concepts and materials are being developed in many contexts, but these are often incompatible and prove difficult to put into widespread practice.
- Key to systematising existing resources and identifying suitable offers is a sufficient, yet easy-to-apply catalogue of related competences.

Informatics – as the science of digital data and methods –
is ideally suited to the establishment of such a framework!