

Training materials

Aim of session:

- To work towards a systematic approach to assessing FAIRness in training materials
- Identify “quick wins” in making materials FAIR
- Identify major pain points in making materials FAIR
- Ultimate output - draft a checklist for assessing and guiding towards FAIRness?

Questions to begin:

- What do we mean by training materials?
- Are these materials you have developed or materials you are responsible for the dissemination of as a course organiser?
- Is it:
 - a. an individual piece of material eg hands-on tutorial by one trainer
 - b. a set of materials used to deliver a session eg PPT, Hands-on tutorial, docker container by one trainer
 - c. a set of materials for a whole course eg set of multiple sessions delivered by multiple trainers; each may contain multiple elements
- How often are these materials updated?
- Do you routinely provide access to your training materials after they have been delivered

What impact does the nature of the materials and their relationship have on how you might assess and ensure FAIRness?

Assessing FAIRness

10 simple rules for making training materials FAIR

<https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1007854>

1. Plan to share
2. Improve findability of your training materials by properly describing them
3. Give your training materials a unique identity
4. Register you training materials online
5. Define access rules for your training materials
6. Use an interoperable format for your training materials
7. Make your training materials (re)usable for trainers
8. Make your training materials usable for trainees

9. Make your training materials contribution friendly
10. Keep your training materials up-to-date

Potential detailed questions:

Findable

1. Title of training material/course:
2. Description of the material/course:
3. Current URL of the training material/course?
4. Does the training material have any identifiers such as a URI assigned, e.g. DOI?
5. Materials are easily discoverable online (eg. when doing a google search)
6. Described and annotated in a standard manner eg Bioschemas; and / or with ontologies / controlled vocabularies / keywords eg EDAM

Accessible

7. Have the training materials been deposited in a repository (Figshare, GOBLET, Github, etc)? If yes, is this repository open access, access controlled, registered access.
8. The materials can be freely downloaded or accessed from a webpage.
9. Associated resources (e.g. tools, VMs and data) , used as part of the training are shared in a public repository.

Interoperable

10. What format is your training material available in? Is it usable / editable etc by others eg PPT / Markdown / PDF?

Re-usable

11. Is associated with structured metadata? See table below for examples including Target audience / LOs.
12. Are the training materials versioned? (Date of creation and/or update available)
13. Information is provided describing how to cite the materials / tools / datasets used.
14. Information is provided about the creator(s) of the materials. Licensing information is provided on the training material (creative commons)
15. Do these materials have associated resources? If so, what formats (e.g. scripts/code (e.g notebooks), VM, etc) are the resources available in?
 - a. When were these resources created / updated?
 - b. If VMs etc are the technical requirements to run them also included in the description?

Other issues?

1. How do you keep materials up to date?
2. How you accept contributions to changing / adding to / revising materials?

Materials descriptions / metadata for reuse

Type of metadata	What to include
Title	Title of the training material.
Contact details	Author(s) name and contact details.
Licensing and (re)use details	License under which the materials are shared, and rules and conditions for (re)use and contribution.
Preferred citation	Instructions on how to cite your material.
Description	Overview of the subject matter, aims of the training, and language in which the training is delivered.
Learning outcomes	Statements that indicate what trainees should be able to do upon successful completion of the training.
Target audience	The intended audience, their prerequisite knowledge and skills, their general background, and how the training material will help them.
Required resources	Technical resources and related materials (software requirements, datasets, infrastructure requirements, etc.).
Keyword	Keywords or tags identifying the topic of the materials.
Structure and duration	Description of the structure of the materials and setting in which to deliver them, including the time allocated to each part (lectures, exercises, etc.)
Additional information	Items that provide additional information about (re)use and delivery of the materials (e.g., general tips and guidance).
Links and references	Links and references that are relevant to the content but not required for delivery of the materials.
Date of last revision	Date of last update of the materials and the version.

<https://doi.org/10.1371/journal.pcbi.1007854.t002>

Potential checklist start

Metadata	
Title of material	
Contact details	
Licensing and (re)use details	
Preferred citation	
Description	

Learning Outcomes	
Target Audience	
Required resources	
Keyword(s)	
Structure and duration	
Additional information	
Links & references	
Date of last revision	