



FOSTER & OpenAIRE training and learning resources on Open Science and Research Data Management

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EaPConnect's OpenAIRE Training | Kyiv | June 5th, 2019



Open Science courses to re-use

What is Open Science?	Best Practice in Open Research	Open Access Publishing	Open Peer Review	Sharing Preprints
				
Data Protection & Ethics	Open Source Software & Workflows	Managing & Sharing Research Data	Open Science & Innovation	Open Licensing
				

<https://www.fosteropenscience.eu/toolkit>

Open Science courses

Answering burning questions of researchers



Where relevant, discipline specific examples
(CRG, GESIS, DARIAH-EU)

Interactive content (gamification, quizzes)



Reviewed by community

Badges



5 learning paths

Effort 2-4 hours

Complete a set of courses & get a badge

FOLLOW OUR LEARNING PATHS:

- The open peer reviewer
- The responsible data sharer
- The reproducible research practitioner
- The open innovator
- The open access author

Learning paths

The
Reproducible
Research
Practitioner



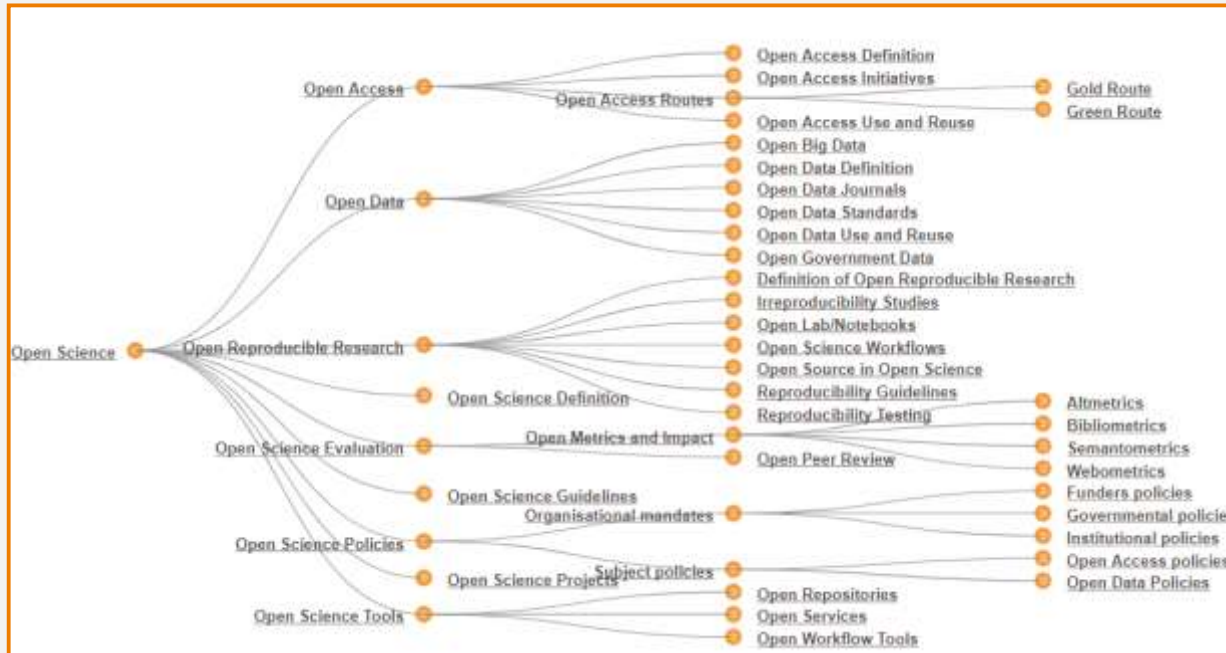
The Open
Peer
Reviewer



The Open
Access
Author



Materials to re-use



Paper available at <http://oro.open.ac.uk/44719/>. Image available at <http://oro.open.ac.uk/47806/>

Learning Paths

The following are a list of Learning Path that will be soon available on the platform. Please keep in mind that the learning paths and badges described here are work in progress.



The open peer reviewer

The practice of peer review is evolving to become more open. This pathway will help you to understand the move towards Open Peer Review and equip you to be able to participate - both as an author and as a reviewer.

Effort: 2-3 hours

Level: intermediate and advanced

The learning path will be completed by finishing the following courses:

- Open peer review
- Managing and sharing research data
- Open source software and workflows



The responsible data sharer

Sharing data is great but you need to know what data you can share, with whom you can share, when to share, and how best to share. This pathway will equip you with the knowledge you need to make informed decisions about sharing your data responsibly.

Effort: 3-4 hours

Level: intermediate and advanced

The learning path will be completed by finishing the following courses:

- What is open science?
- Managing and sharing research data
- Data protection and ethics
- Open licensing



The reproducible research practitioner

Recent studies have revealed a reproducibility crisis for published findings. This pathway will help you to make sure that your published findings can stand up to scrutiny and serve as a solid foundation for others to build upon.

Effort: 3-4 hours

Level: intermediate and advanced

The learning path will be completed by finishing the following courses:

- What is Open Science?
- Best practice in open research
- Open Access publishing
- Managing and sharing research data
- Open source software and workflows



The open innovation accelerator

The notion that innovation happens within set boundaries is being challenged. This pathway will provide you with the skills you need to spot opportunities and to build open innovation aspects into your research.

Effort: 2-3 hours

Level: intermediate and advanced

The learning path will be completed by finishing the following courses:

- Open Science and innovation
- Managing and sharing research data
- Open licensing



The open access author

There is more to consider when publishing for open access than simply selecting a 'green' or 'gold' route. This pathway will help you to look at publishing in a more holistic way to ensure that your publications, underlying data and software are accessible and can be used to support your findings.



The open access author

There is more to consider when publishing for open access than simply selecting a 'green' or 'gold' route. This pathway will help you to look at publishing in a more holistic way to ensure that your publications, underlying data and software are accessible and can be used to support your findings.

Effort: 3-4 hours

Level: intermediate and advanced

The learning path will be completed by finishing the following courses:

- What is open science?
- Open access publishing
- Managing and sharing research data
- Open licensing
- Sharing preprints
- Open Peer Review

Open Science Training Handbook

Open Science Basics



Open Concepts &
Principles



Open Research Data
& Materials



Open Research
Software & Open
Source



Open Education
Resources



Open Access to
Published Research
Results



Open Science
Policies



Open Licensing &
File Formats



Open Peer Review,
Metrics &
Evaluation



Reproducible
Research & Data
Analysis



Open Science Training Handbook



Further resources



Questions,
obstacles, &
common
misconceptions



Key components:
Knowledge & skills



Learning objectives
to achieve



Why is it important?



What is it?



book.fosteropenscience.eu

On Learning and Training



How to

- **Prepare** your workshop
 - Theoretical learning strategies
 - Different audiences
 - Strategies to develop motivation
- **Execute** your workshop
 - How to design a course
 - How to choose content
 - How to start training
- **& reflect** on your workshop
 - Aspects to evaluate

Organisational Aspects



- Venue
 - Timing & budget
 - Equipment & media
 - Marketing & advertising strategy
 - Registration
 - Evaluation
- Check list



Example training outlines



•24 exercises:

- Format, time needed, topic, learning objectives, description, materials needed, level of prior knowledge, how to adapt

•Open Science Café

- Enable low-threshold discussion and dialogue between different stakeholders

Open Science Cafe
Brought to you by:

Scientific publishing will always be dominated by commercial publishing houses.

Open data should be a responsibility of the institution, not of the individual researcher

When assessing quality of research, 'openness' should be as big a factor as journal prestige

Data sharing is more important than Open Access to publications.



CC BY Martine Oudenhoven

www.fosteropenscience.eu/content/organise-your-own-open-science-cafe

July 20, 2018

Project deliverable | Open Access

Recommendations on Open Science Training

Iryna Kuchma; FOSTER Plus consortium

Other(s)

Helene Brinken; José Carvalho; Antónia Correia; Eloy Rodrigues; Anna Schwickerath

Building on Open Science Training Handbook (available as gitbook at <https://book.fosteropenscience.eu/> and in the github repository at <https://github.com/Open-Science-Training-Handbook>), and on successes of over 40 online and face-to-face events that FOSTER organized in 2017-2018, this report provides good practice recommendations on open science training targeting researchers and multipliers – train-the-trainers approaches for research support staff and librarians. It includes the following:

- A selection of open science topics to include in your training activities;
- Useful tips on how to plan based on outcomes rather than objectives;
- Overview of types of training based on the audience size, funds available, duration of training and training levels;
- Organizational task checklist;
- Exercises and glossary;
- Overview of FOSTER training events for life science, social sciences and humanities and FOSTER open science clinic series of speed counselling for early career researchers, Tech Transfer and Grant Officers and National Contact Points for Horizon 2020;
- Recommendations on train-the-trainer approaches highlighting our experience from FOSTER open science trainer bootcamp and materials from two other train-the-trainer courses: ELIXIR EXCELERATE and Powering up your 2018 (data skills) from ANDS, Nectar and RDS.
- Roadmap for implementing open science training practices in research institutions suggesting six practical actions to be implemented by research institutions to support a cultural change towards open science.

1,037

views

720

downloads

[See more details...](#)



[See more details](#)

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3 readers on Mendeley

Indexed in

OpenAIRE

Publication date:

July 20, 2018

DOI:

[10.5281/zenodo.1341023](https://doi.org/10.5281/zenodo.1341023)

Keyword(s):

open science training | open science
train-the-trainer

Grants:

European Commission

- FOSTER Plus - Fostering the practical implementation of Open

<https://zenodo.org/record/1341023#.XPbHQ49S83H>



Open science trainer's corner

Do you organise Open Science trainings yourself or are planning to do so? On this page you can find a set of materials that offer some inspiration or help you to get started in the first place. Take a look and adapt or re-use the resources for your own trainings.



The Open Science Training Handbook

This handbook brings together methods, techniques and practices, to support educators of Open Science to create high quality and engaging trainings. It is available under [Creative Commons Public Domain Dedication \(CC0 1.0 Universal\)](#). You do not have to ask our permission to re-use and copy information from this handbook.

- Access the Open Science training handbook [here](#).



Illustrations, icons & cartoons

<https://www.fosteropenscience.eu/trainers-materials>

During the book sprint the artist Patrick Hochstenbach draw more than 100 icons and cartoons to illustrate the Open Science training handbook. They are now for you available under [Creative Commons Public Domain Dedication \(CC0 1.0 Universal\)](#) to re-use.

- Download the large set of small icons such as a book, coffee, researcher, megaphone etc. here: Large ZIP archive of [PNG graphics](#) (1.5Mb)
- Download the 16 cartoons, e.g. fundamental rules of open science here: ZIP archive of [16 PNG illustrations](#) (15Mb)

OS Primers | Menu

https://www.openaire.eu/os-primers


110%

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OpenAIRE

SERVICES SUPPORT OPEN SCIENCE IN EUROPE ABOUT SIGN IN

Open Science Primers: getting you started on good practices

 Open Access Basics

An Open Access primer to get you started

 An RDM Handbook

A primer on managing your research data

<https://www.openaire.eu/os-primers>

RDM Handbook | Support

https://www.openaire.eu/rdm-handbook

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Search

OPEN DATA

- HOW TO MAKE DATA OPEN?
- WHY MANAGE DATA?
- RESPONSIBILITIES IN RESEARCH DATA MANAGEMENT
- WHICH DATA SHOULD BE PRESERVED AND SHARED?
- WHY SHARE DATA?
- EXPLORE THE INDICATORS RELATED TO OPEN RESEARCH DATA
- WHAT IS A DATA MANAGEMENT PLAN (DMP)?
- KEY MESSAGES
- VIEW OUR WEBINARS RECORDINGS
- USEFUL LINKS

Open Data

“Open data and content can be freely used, modified and shared by anyone for any purpose”

Source: <http://opendefinition.org>

Tim Berners-Lee's proposal for five star open data <http://5stardata.info>

One star	make your stuff available on the Web (whatever format) under an open licence
Two stars	make it available as structured data (e.g. Excel instead of a scan of a table)
Three stars	use non-proprietary formats (e.g. CSV instead of Excel)
Four stars	use URIs to denote things, so that people can point at your stuff
Five stars	link your data to other data to provide context

Support

RESOURCES

- Open Science Primers
- Guides
- Factsheets
- Use cases

HELPDESK

- FAQs
- Ask a Question

TRAINING

- Webinars
- Workshops
- Community of Practice

<https://www.openaire.eu/rdm-handbook>



<https://www.openaire.eu/guides>

Researchers

[How to comply with H2020 mandates - publications](#)

[How to comply with H2020 mandates - research data](#)

[Research Data Management costs in H2020 projects](#)

[How to make your data FAIR](#)

[How to find a trustworthy repository for your data](#)

[How to create a Data Management Plan for H2020 projects](#)

[Data formats for preservation](#)

[How do I know if my research data is protected](#)

[How do I license my research data](#)

[Can I reuse someone else's research data](#)

[How to deal with non-digital data](#)

[How to deal with sensitive data](#)

[Raw data, backup and versioning](#)

[How can identifiers improve the dissemination of your research outputs?](#)

**Deposit your
research
outcomes**

For researchers



**Anonymize your
data**

For researchers



**Report your
publication and
data to the EC**

For project coordinators



**Claim a
publication or data
to your funding**

For researchers



**Link literature &
data**

For content providers



**Register &
Validate your
repository**

For content providers



**Content
Enrichment**

For Repository Managers



**Track the usage
activity of your
repository**

For content providers



H2020 OpenAIRE Fact sheets

In our effort to make open access for publications and data simple for everyone, we are creating factsheets with a brief overview of how to comply with H2020 OA mandates and how to use OpenAIRE services where available.

| Webinars

Check our past recordings, see what is coming next

[VIEW →](#)



OpenAIRE Services Fact sheets

with all the necessary information about the main OpenAIRE services, and how to use their functionalities to easily adopt Open Science.



Monitor

OpenAIRE Monitoring Services for Funders

Learn how can OpenAIRE helps you measure research funding impact and supports monitoring of Open Access.



Zenodo

The free, open repository from OpenAIRE and CERN

Storing and publishing your data. Who is it for? How to use in a community setting.

VIEW

<https://www.openaire.eu/frontpage/webinars>

Webinars

NCPs (17)

Project coordinators
(39)

Researchers (49)

Research
Communities (30)

Funders (6)

Content Providers
(17)

National (14)

Research support
staff (33)

Data librarians (16)

Browse through our recent webinars



Webinars: H2020 policies on Open Access and Research Data

Back 2 Back Webinars on H2020 Open Science Policy

Wednesday, 12 June 2019

In this webinar on June 12th, our presenters will give an update of current Open Access and Research Data policies in H2020.

Upcoming Webinars

05 Jun 2019 @ 01:00PM - 02:00PM
OpenAIRE internal webinar for
NOADs and consortium
partners: OpenAIRE in EOSC

06 Jun 2019 @ 11:00AM - 12:00PM
Four Good Practices for Software
Development in Open Science

Support

RESOURCES

Open Science Primers
Guides
Factsheets
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HELPDESK

FAQs
Ask a Question

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Webinars
Workshops

Thank you!

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