Open Science Trainer Bootcamp

November 1, 2018, Riga, Latvia

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Introductions

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What we'll be doing today

- Setting the scene
- Who is your audience?
- Identify their training needs
- Identify learning objectives
- Explore different formats
- Design and evaluate your own mini-training
- Troubleshooting

This is not an Open Science Training!

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What IS Open Science?

What do we mean when we talk about Open Science?

Image courtesy of Robin Champieux

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What is your role as trainer?

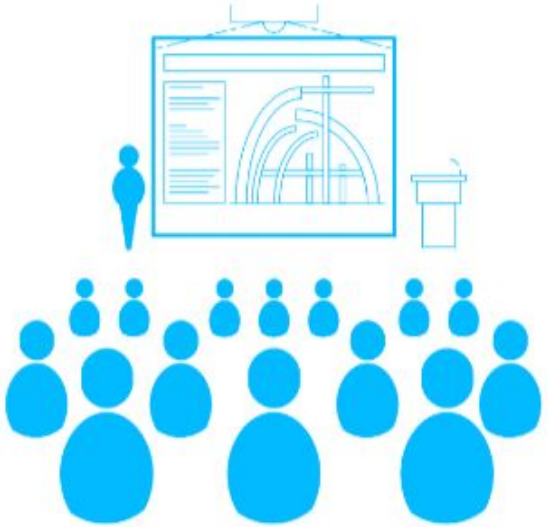
Why do you want to give Open Science Training?

Who is your audience?

How can you reach them most effectively?

Go to **www.menti.com** and use the code **35 23 6**

eifl KNOWLEDGE WITHOUT BOUNDARIES



Open Science Training

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Training examples & practical guidance

Open Science Training Handbook

What is it?

Why is it important?

Learning objectives to achieve

Key components: Knowledge & skills

Questions, obstacles, & common misconceptions

Further resources

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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

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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

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

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Open Science Basics

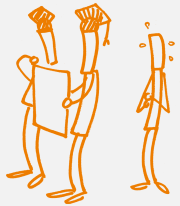
Open Concepts & Principles

Open Access to Published Research Results

Open Science Policies

Open Licensing & File Formats

Open Research Data & Materials



Open Peer Review, Metrics & Evaluation

Reproducible Research & Data Analysis

Open Research Software & Open Source

Open Education Resources

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Recommendations on Open Scienc

https://zenodo.org/record/1341023#.W9hkzfZoR1o

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.

Preview

Page: 1 of 33 Automatic Zoom

FOSTERING THE PRACTICAL IMPLEMENTATION OF OPEN SCIENCE IN HORIZON 2020 AND BEYOND – 741839

D3.2 – Recommendations on Open Science Training

539 views

180 downloads

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Indexed in OpenAIRE

Publication date:
July 20, 2018

DOI:
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Keyword(s):
open science training | open science | train-the-trainer

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Communities:
FOSTER, Facilitating Open Science in European Research

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Versions

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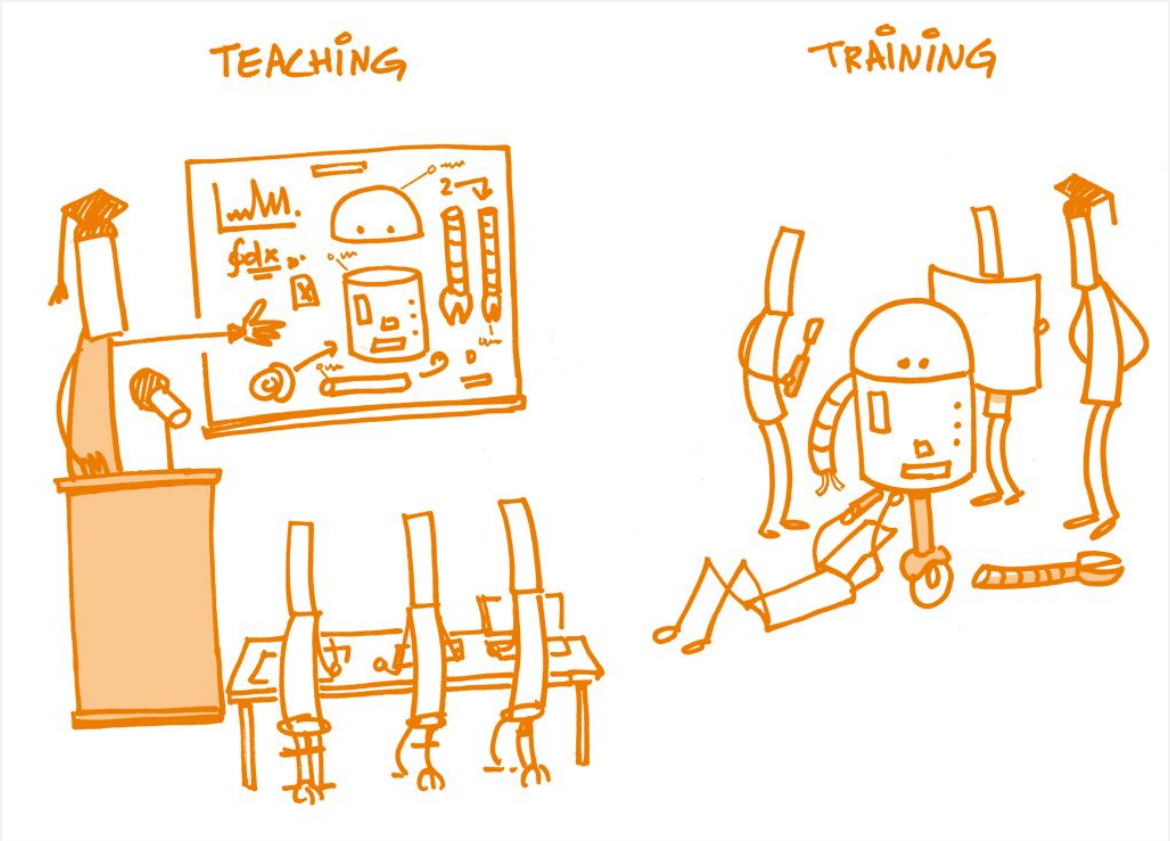
Hands-on & interactive



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Homo Ludens: Man is playful

Homo Ludens: Man is playful

Homo Ludens: Man is playful

Homo Ludens: Man is playful

Homo Ludens: Man is playful

Share your experiences!

Group discussion:

What was the best training you attended?

What was the worst training you attended?

⟹ What did all of them have in common?

⟹ What parts of it were predictable?

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Open Elements in your training

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Finding open materials and understanding what you can and cannot do with them

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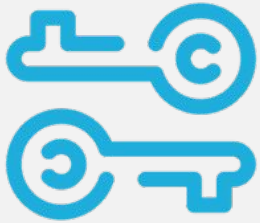

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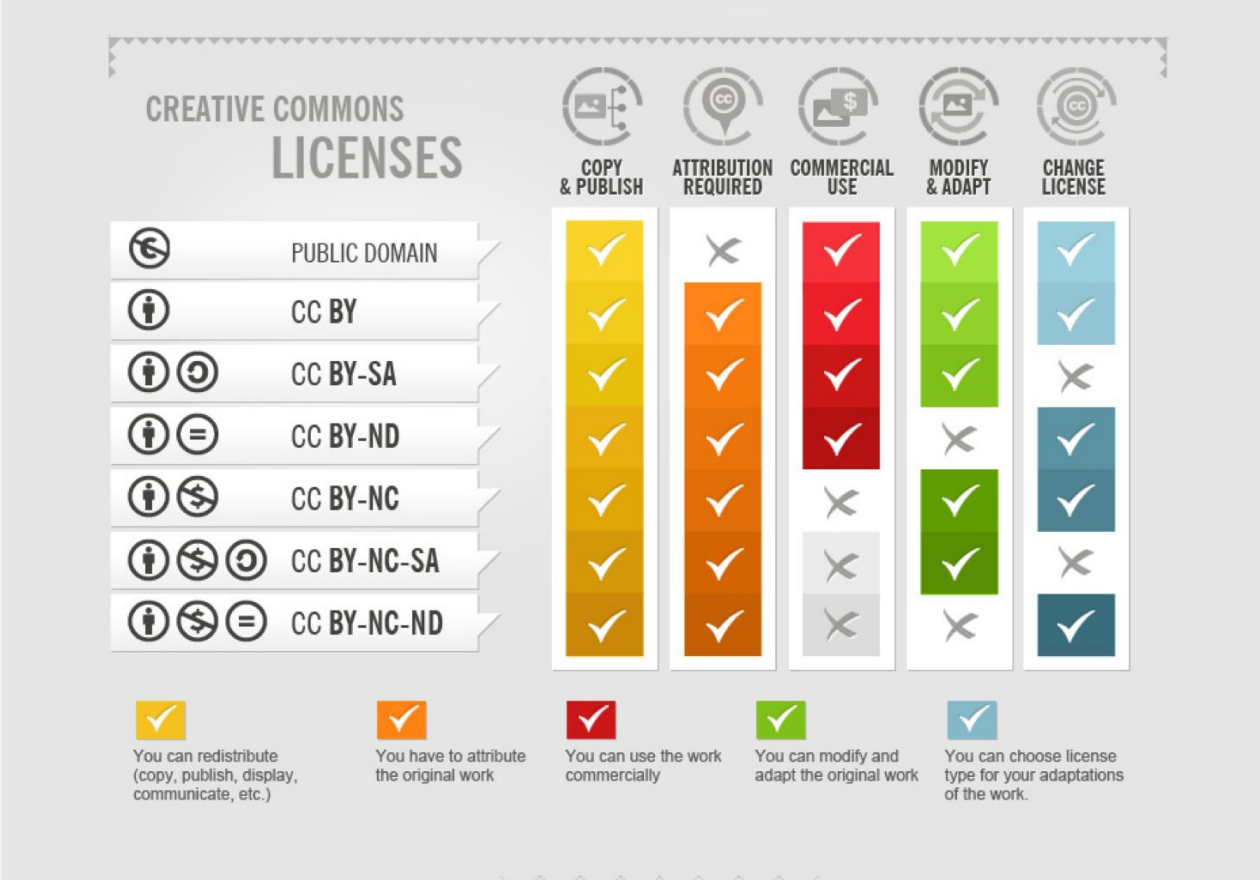

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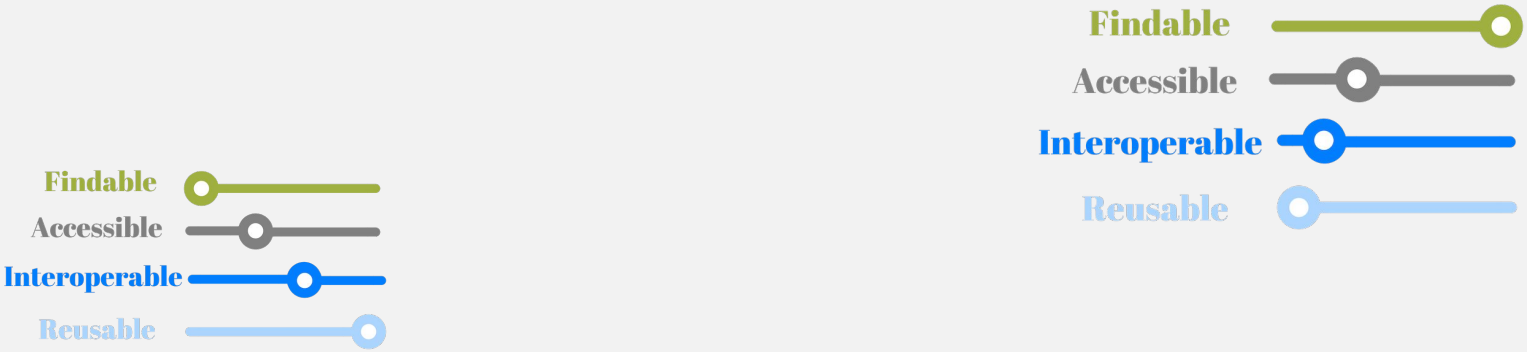

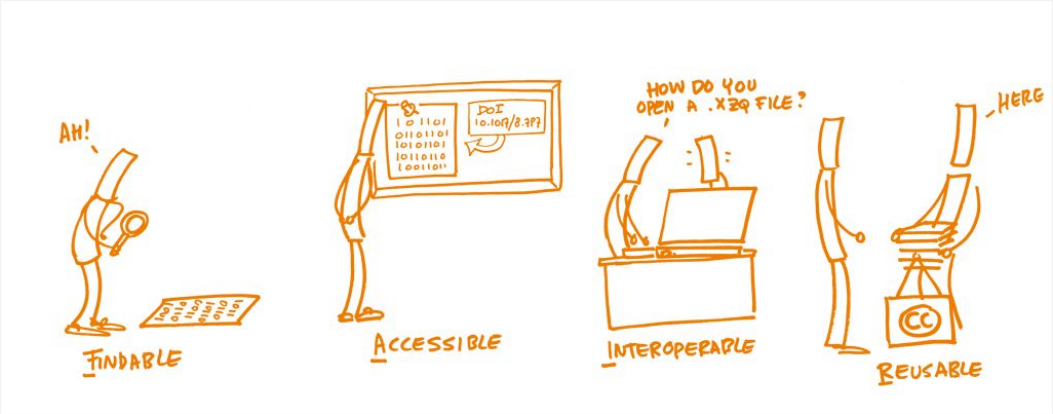

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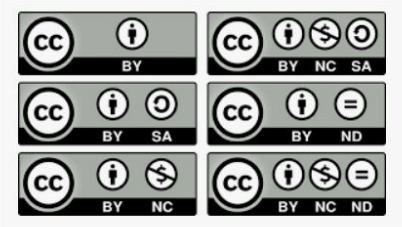

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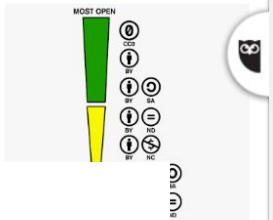

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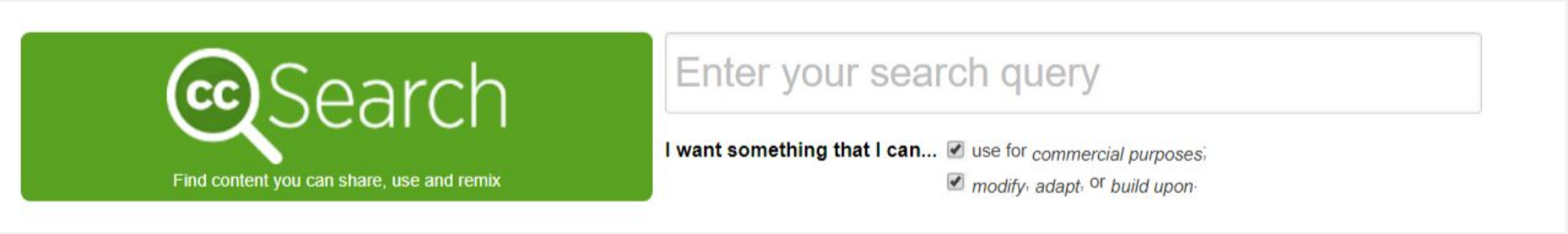

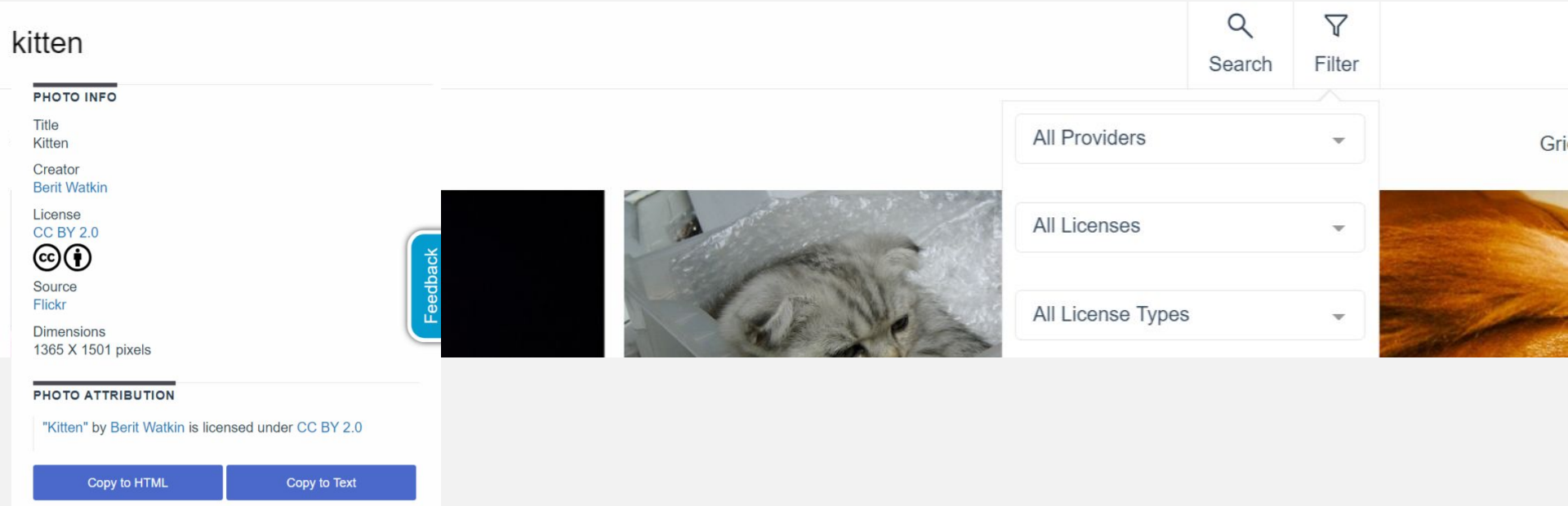

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By FutureTDM

Publication year: 2017 | Text And Data Mining | Open S

Authors: FutureTDM
Publication year: 2017
Language: English (EN)
Level of knowledge: Introductory: aware of
Usage rights: CC-BY

Speaker

Topics

Apply

Audience

- Librarians and Repository managers
- Policy makers and Funders
- Project Managers
- Research Administration

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A stray kitten in Rizal Park, Manila

More details

Kenny Louie from Vancouver, Canada - Chin up

Stray cats seem to be common place in many Asian countries. Unregulated and left to their own devices strays can be found all over the place in the most unlikely places. This tiny cat was in the middle of Rizal Park in the heart of Manila on a late Saturday evening with thousands of people around. Its mother was no where in sight.

File: Kitten in Rizal Park, Manila.jpg
Created: 21 February 2009

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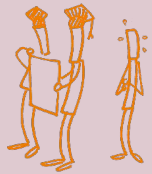
Reusable Courses

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**
				

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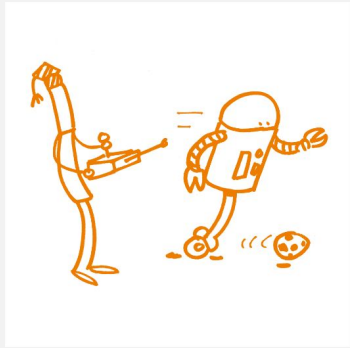
Open Science Courses

- Answering burning questions of researchers
- Where relevant, discipline specific examples (CRG, GESIS, DARIAH-EU)
- Interactive content (gamification, quizzes)
- Reviewed by community



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Badges

- 5 learning paths
- Effort 2-4 hours
- Complete a set of courses & get a badge

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Learning paths

The Reproducible Research Practitioner

The Open Peer Reviewer

The Open Access Author

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Open science trainer's corner

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

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)

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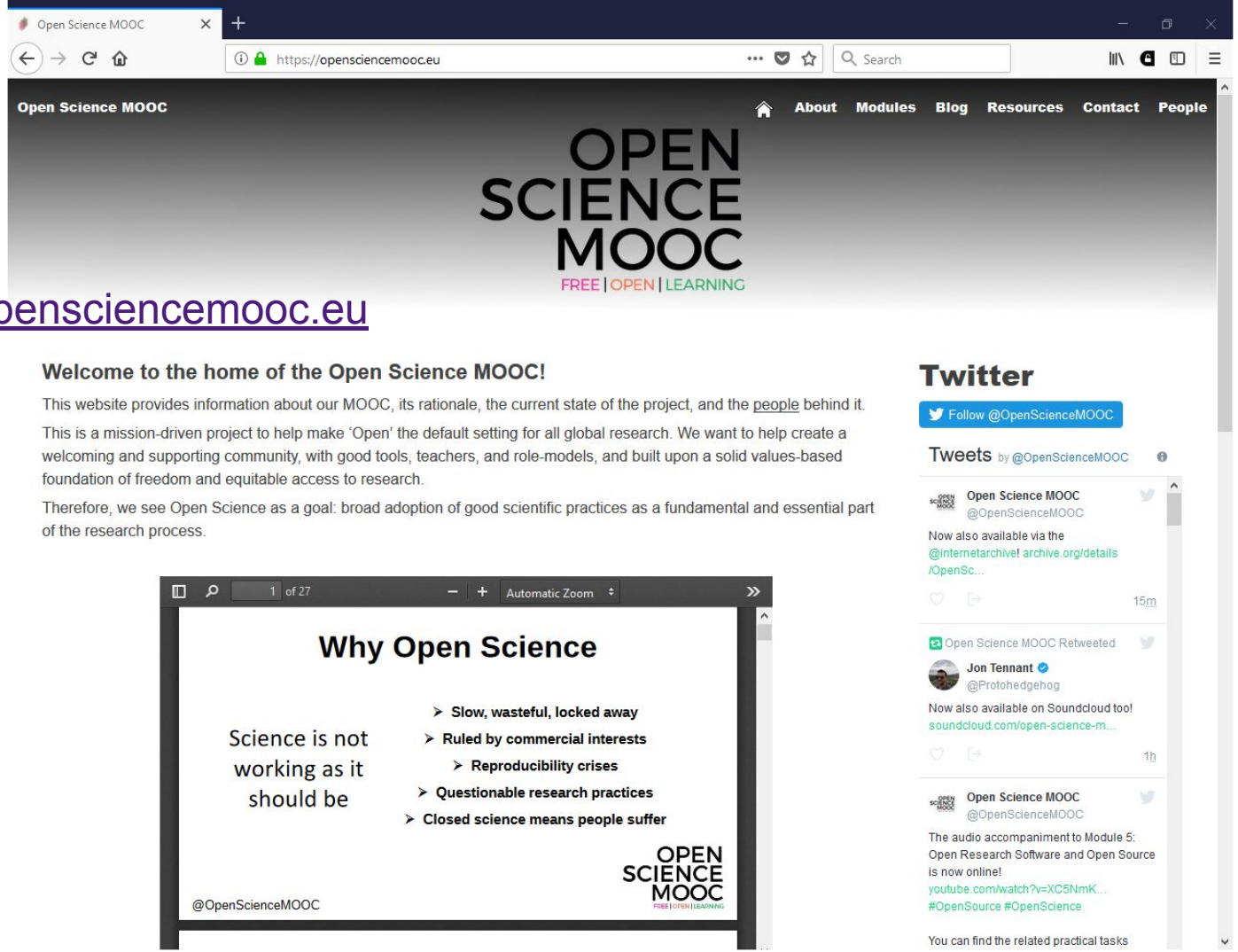

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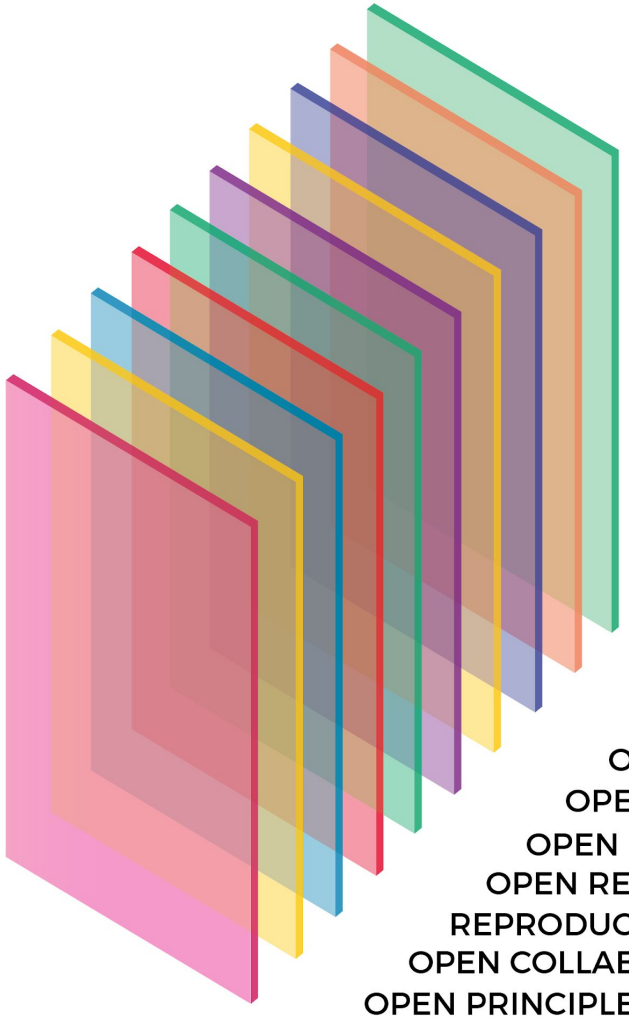

OPEN SCIENCE MOOC

FREE | OPEN | LEARNING

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OPEN EDUCATIONAL RESOURCES
PUBLIC ENGAGEMENT WITH SCIENCE
OPEN EVALUATION
OPEN ACCESS TO RESEARCH PAPERS
OPEN RESEARCH SOFTWARE & OPEN SOURCE
OPEN RESEARCH DATA
REPRODUCIBLE RESEARCH & DATA ANALYSIS
OPEN COLLABORATION
OPEN PRINCIPLES

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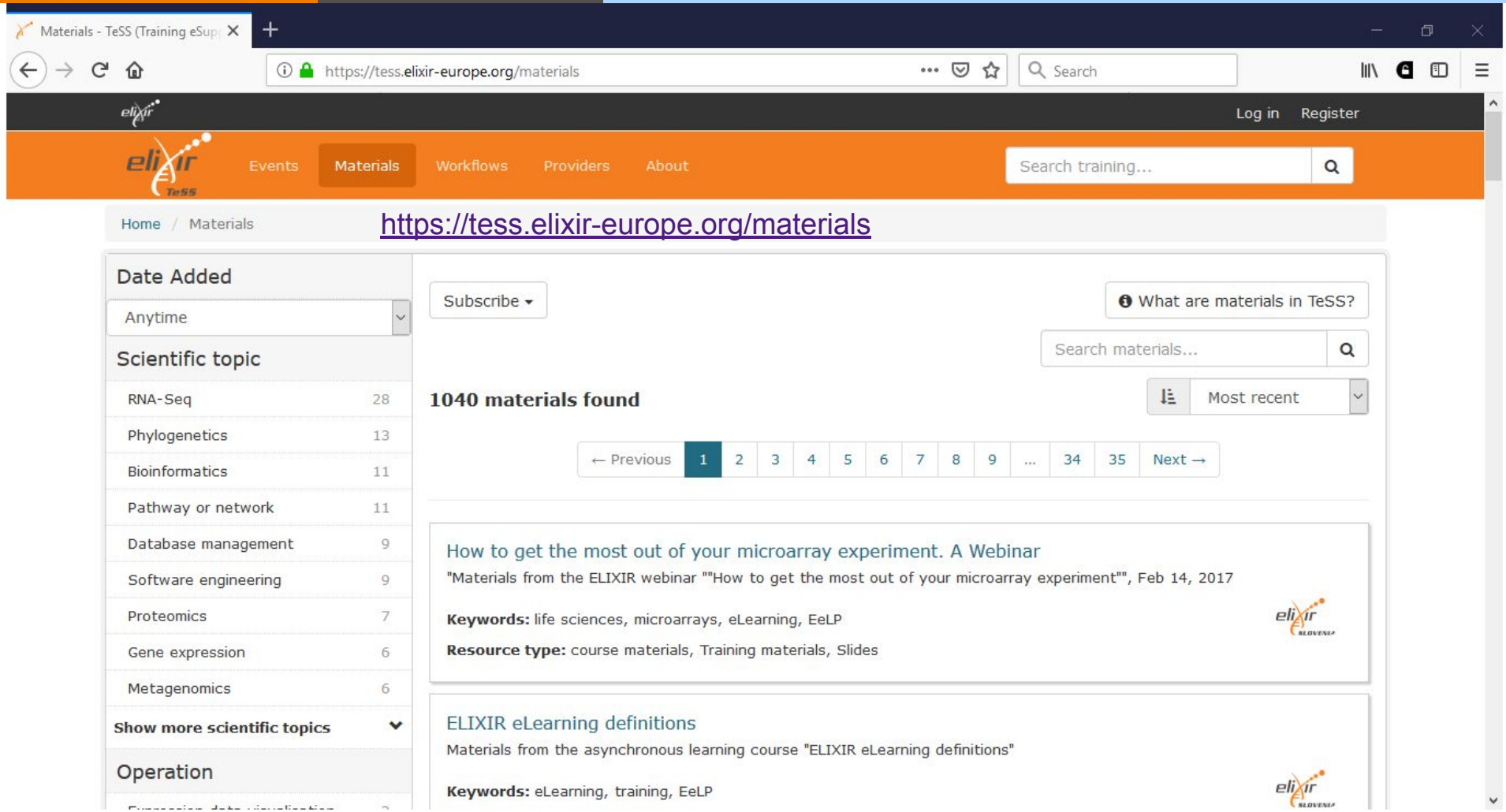
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Resource type: course materials, Training materials, Slides
ELIXIR eLearning definitions
Materials from the asynchronous learning course "ELIXIR eLearning definitions"
Keywords: eLearning, training, EeLP

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Expert Tour Guide on Data Management

About this expert tour guide

This tour guide by CESSDA ERIC (the Consortium of European Social Science Data Archives European Infrastructure Consortium) aims to put social scientists like yourself at the heart of making their research data findable, understandable, sustainably accessible and reusable.

You will be guided by European experts who are - on a daily basis - busy ensuring long-term access to valuable social science datasets, available for discovery and reuse at one of the 17 CESSDA social science data archives. With this guide and the training events being held across Europe, we want to accompany and inspire you in your journey through the research data life cycle.

https://www.cessda.eu/Research-Infrastructure/Training/Expert-Tour-Guide-on-Data-Management

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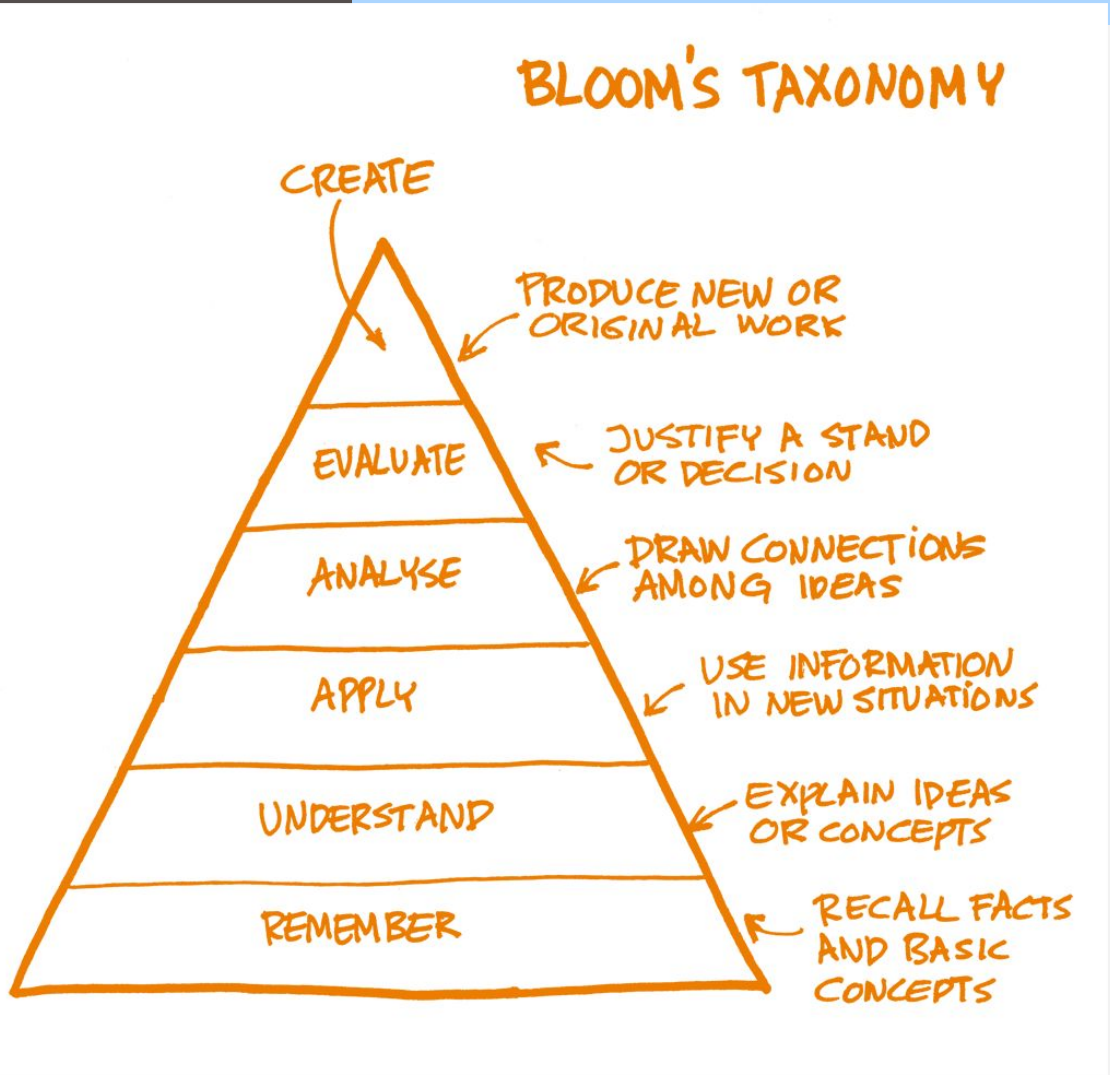
How to give training


BLOOM'S TAXONOMY
CREATE
PRODUCE NEW OR ORIGINAL WORK
EVALUATE
JUSTIFY A STAND OR DECISION
ANALYSE
DRAW CONNECTIONS AMONG IDEAS
APPLY
USE INFORMATION IN NEW SITUATIONS
UNDERSTAND
EXPLAIN IDEAS OR CONCEPTS
REMEMBER
RECALL FACTS AND BASIC CONCEPTS

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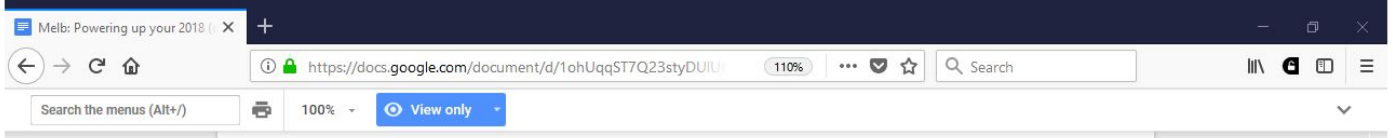

1. Adults are internally motivated and self-directed	• Graded learning -- increase complexity as the program unfolds • Lead the student toward inquiry -- before too many facts • Feedback -- regular, constructive and specific • Goals -- which they complete and "tick off" • Encourage use of resources • Vary learning styles (eg VARK)
2. Adults bring life experiences and knowledge to learning experiences	• Draw on experiences • Facilitate reflective learning opportunities
3. Adults are goal oriented	• Link learning to work goals • Provide real case-studies • Ask questions -- motivate reflection, inquiry and further research
4. Adults are relevancy oriented	• Reflection -- what they learnt,how to apply it • Provide some choice -- to reflect individual interests
5. Adults are practical	Students move from classroom to hands-on problem solving where they can recognise firsthand how what they are learning applies to the work context. • Be explicit -- about how learning is useful and applicable to the job • Active participation -- try things rather than observe
6. Adult learners like to be respected	Respect can be demonstrated by: • Acknowledge -- the wealth of experiences • Regarding them as an equal colleague • Encourage expression -- of ideas, reasoning and feedback
(7. Adults are pressed for time)	(from Training Principles of Adult Learning White Paper) • Just in time • Just for me

https://docs.google.com/document/d/1ohUqqST7Q23styDUIU6t25W2q7rvYpvbr_ZlsJxOfjA/edit

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Plan based on outcomes rather than objectives

Learning objectives

- Describe the intentions of the instructor by stating **the purpose and goals** of the course.
- Focus on the **content and skills** important within the programme.
- May describe **what the instructors will do**.
- Should be **specific and detailed**.

https://open-science-training-handbook.gitbook.io/book/on-learning-and-training

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Learning outcomes

Learning outcomes are statements that describe or list **measurable and essential mastered content-knowledge — reflecting skills, competencies, and knowledge that trainees have achieved and can demonstrate** upon successfully completing a course.

https://open-science-training-handbook.gitbook.io/book/on-learning-and-training

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Learning outcomes (2)

Outcomes **express higher-level thinking skills that integrate course content and activities and can be observed as a behavior, skill, or discrete usable knowledge** upon completing the course.

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Learning outcomes (3)

Outcomes are exactly what assessments are intended to show – specifically **what the trainees will be able to do upon completing the course.**

An assessable outcome can be displayed or observed and evaluated against criteria.

Outcomes are **clear and measurable criteria for guiding the teaching, learning, and assessment process** in the course

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https://www.fosteropenscience.eu/learning/what-is-open-science

This introductory course will help you to understand what open science is and why it is something you should care about. You'll get to grips with the expectations of research funders and will learn how practising aspects of open science can benefit your career progression.

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Upon completing this course, you will

- understand what Open Science means and why you should care about it
- be aware of some of the different ways to go about making your own research more open over the research lifecycle
- understand why funding bodies are in support of Open Science and what their basic requirements are
- be aware of the potential benefits of practicing open science

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It’s up to you ...

- in groups of 3 ...
- each pick an aspect of open science that interests you
- write it down
- think of a learning outcomes for training on your chosen aspect
- compare & discuss the results in your group

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Your role as a trainer (self-reflection)

It’s up to you ...

- In groups of 2 ...
- Look at the scenarios on your handout
- In each column, choose the one you’d be most and least comfortable with. Do this **individually**.
- Compare & discuss the results with your neighbour
- What makes certain scenarios easier or harder for each of you?

In both lists below mark the characteristic which would make you as a trainer feel the most (M) comfortable and the least (L) comfortable.

A session ….

- with participants not from your field
- with just undergraduates
- with 8 people sent by one employer and 2 others
- with just librarians
- with only professors
- with all participants paying a 300€ fee for 1 day
- with 50% researchers & 50% traditional publishers
- with people from all parts of the world

A session ….

- with people dropping in late and leaving suddenly
- where participants want to change the programme
- without internet
- where participants work with a self paced tutorial
- in a café instead of a classroom
- where the host introduces you as super OS expert
- where you are the only facilitator
- where the goal is to convince people of OS

With thanks to Bianca Kramer & Jeroen Bosman for exercises!

Aspects of Open Science training

available at: [10.6084/m9.figshare.6163790](https://doi.org/10.6084/m9.figshare.6163790)

Bianca Kramer & Jeroen Bosman, Utrecht University Library

FOSTER Open Science Bootcamp, April 18-20, 2018

@MsPhelps
@jeroenbosman

Finding a place for your training & messages in the competitive research landscape

- What methods do you, and could you, use to drive **attention** to your training activities?
- What methods do you, and could you, use to drive up **attendance** at your training activities - how can you turn REGISTRATION (i.e. interest) into ATTENDANCE (i.e. action)
  https://docs.google.com/document/d/1ohUqqST7Q23styDUlU6t25W2q7rvYpvbr_ZlsJxOfjA/edit

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How do you know if you are making a difference?

How does your unit/department evaluate the efficacy & impact of training it provides to researchers & students? Table discussion.

https://docs.google.com/document/d/1ohUqqST7Q23styDUlU6t25W2q7rvYpvbr_ZlsJxOfjA/edit

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Designing your own mini-training

Design your own training

FORMAT:
Half day workshop

TOPIC:
Choose (per 2)

Pick a Card:

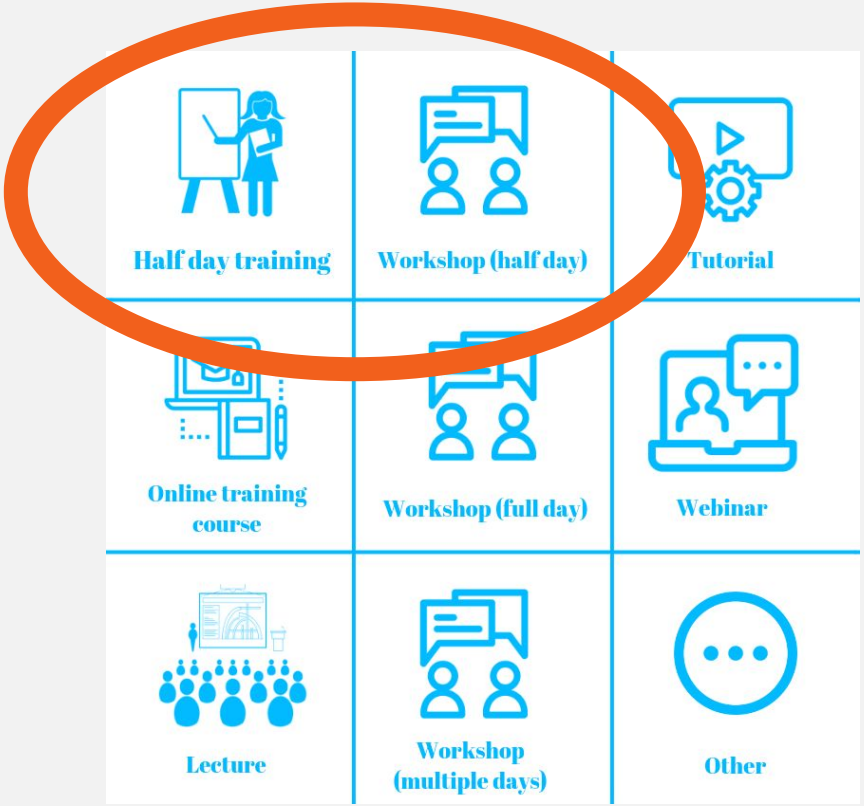
AUDIENCE SIZE
AUDIENCE TYPE
KNOWLEDGE LEVEL

Create a PERSONA

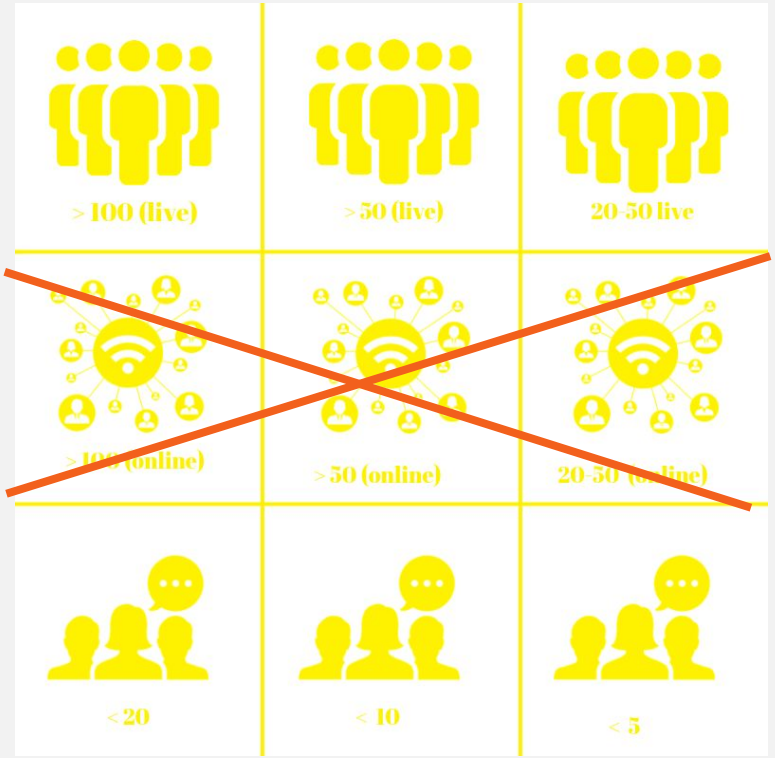
Present your plans (15 mins):

- Structure
- Materials
- Exercise
- ...

Training Type

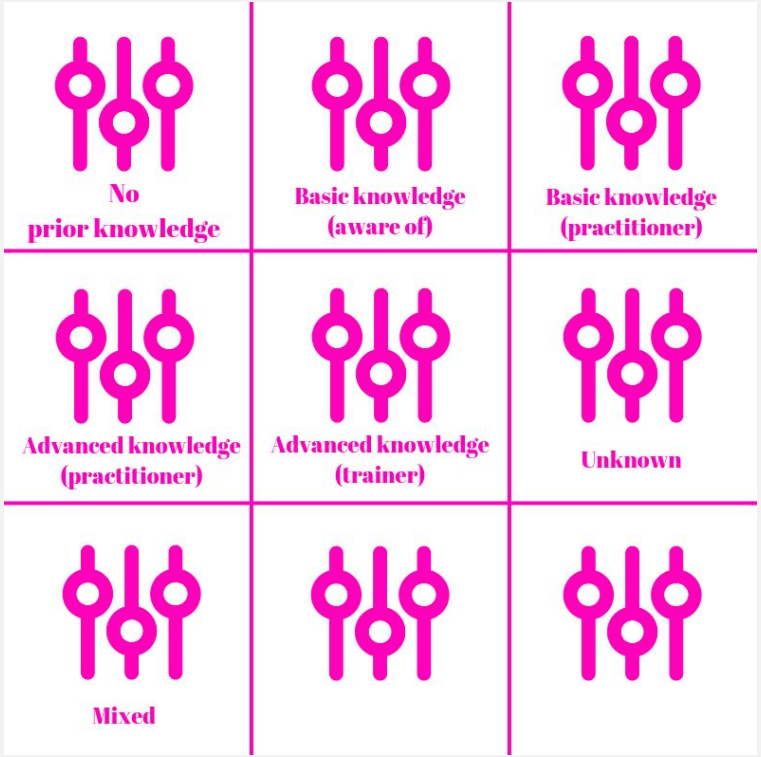


Audience SIZE



Audience TYPE

Knowledge Level



Your audience

BIO

Occupation:

Age:

Education:

Personality in 3 words:

SKILLS (1=none, 5 = very skilled)

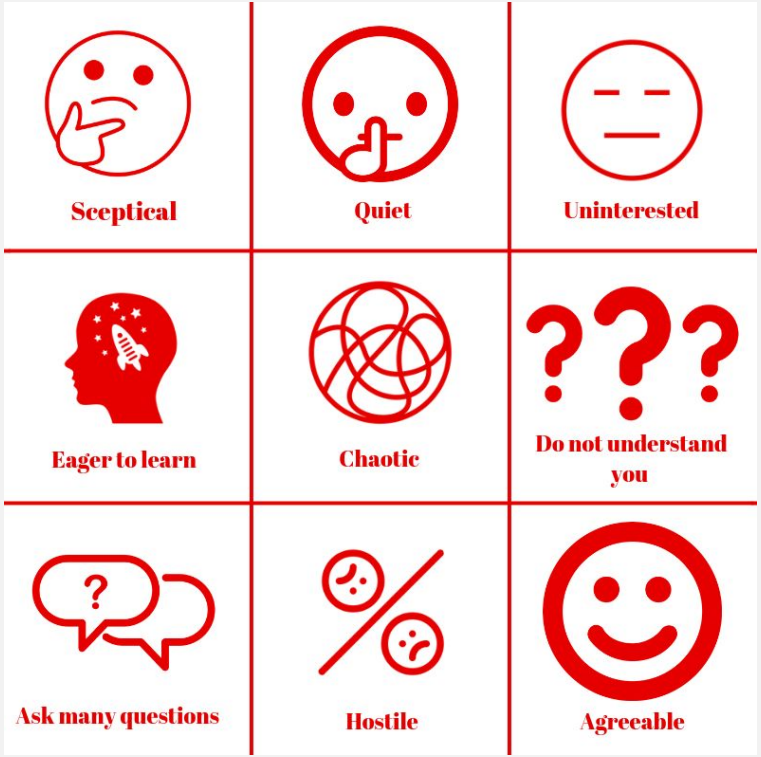
Job experience:	1 2 3 4 5
Open Science	1 2 3 4 5
Training experience	1 2 3 4 5
Technology:	1 2 3 4 5

Name:

MOTIVATION/GOALS

FRUSTRATION

The Unpredictable: Audience Mood



The Unpredictable: External factors

Design your own training

Present your plans (15 mins):

- Structure
- Materials
- Exercise
- ...

Troubleshooting:

AUDIENCE MOOD
DISTURBING FACTORS

EVALUATION

- Is the proposed training appropriate for audience size, type and level of knowledge?
- Are the training materials adequate, understandable and accessible?

FOSTER

Thank you! Questions?

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