Facilitating Open Science Training in European Research

Training for Open Science: the FOSTER approach

Eloy Rodrigues
Overview

1. The FOSTER project

2. The FOSTER Approach
   - Identifying and Organising Training Resources
   - Releasing the FOSTER Portal
   - Conducting/Supporting FOSTER Training

3. Concluding Remarks
The FOSTER project

Facilitate Open Science Training for European Research

- Facilitate Open Science Training for European Research
- Two-year EU-funded FP7 project (Feb 2014 - Jan 2016 - Now extended until July 2016)
- 13 consortium partners (Project lead University Minho)
- Collaboration and support by 27 other organizations (Institutions, Graduate Schools, Associations from students and young researchers, etc.) from 13 countries

“Spread the seeds of Open Access and Open Science”

This project has received funding from the European Union’s Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612425
OBJECTIVES

• To support different stakeholders, especially younger researchers, in adopting open access in the context of the European Research Area (ERA) and in complying with the open access policies and rules of participation set out for Horizon 2020

• To integrate open access principles and practice in the current research workflow by targeting the young researcher training environment

• To strengthen institutional training capacity to foster compliance with the open access policies of the ERA and Horizon 2020 (beyond the FOSTER project)

• To facilitate the adoption, reinforcement and implementation of open access policies from other European funders, in line with the EC’s recommendation, in partnership with PASTEUR4OA project
METHODS

• Identifying already **existing content** that can be reused in the context of the training activities and repackaging, reformatting them to be used within FOSTER, and developing/creating/enhancing contents as required

• Developing the **FOSTER Portal** to support e-learning, blended learning, self-learning, dissemination of training materials/contents and a Helpdesk

• Delivery of **face-to-face training**, especially **training trainers/multipliers** who can deliver further training and dissemination activities, within institutions, nations or disciplinary communities
Training Resources

Content for Open Science – Open the shell and show us your pearls!

Parent Category: News  Published: Thursday, 10 April 2014  Written by Astrid Orth

Have you, or your organization, created or repackaged/reused quality content (from briefing papers, to presentations, videos, etc) on open access, open data and open science in any language, which can be useful and used on the FOSTER training context? We are now calling for the community contribution on the identification and mapping of relevant content which can be used for FOSTER training, to train researchers, project managers, administrators and future trainers in the benefits of Open Science and compliance with Horizon 2020 Mandate (Article 29.2 of the model Grant Agreement).

We are looking for a wide variety of content both thematically (from general open access advocacy, to discipline specific promotion/training for open science) and regarding formats (from individual texts, slides or videos to full packaged training objects or courses). With your help, we want to showcase engaging and instructive training materials and reach out to diverse disciplinary communities and countries in the European Research Area.

So if you have produced, used, or are simply aware of, quality content on open access, open data an open science, and want to give that content a wider audience and use in collaboration with the FOSTER training programme, please describe it using the form available at: http://goo.gl/meV0EK

This call for content will remain open during the project lifetime, but we are aiming to have an initial relevant sample of content by early May, so we would be very grateful if you submit your content until April 30th.
Training Resources

- Suggested by project consortium and community (ongoing) & created by Training events
- Identify, classify and prioritise content by target group, subject focus and level of expertise
- Minimum metadata for storage\(^1\): Title, General description of the resource, Author/Creator, Date, URL, Language, Target audience, Scientific discipline, Level of Knowledge, Main topic, Secondary topic, Resource licence, Media type, File type, Size
- Categorisation: 9 areas, 4 levels deep

\(^1\) Based on DaMSSI-ABC-Classification Data Management Skills Support Initiative - Assessment, Benchmarking, Classification http://www.dcc.ac.uk/training/damssi-abc
Content Map/Open Science Taxonomy
FOSTER Training Content

• Presentations
• Guides
• Publications
• Videos

Research is ultimately there to be used
Maciej Chojnowski (Open Science Platform) in conversation with Dr Cameron Neylon (PLOS)

Video / Link

Interview with Dr Cameron Neylon (Warsaw, 10 March 2014)
The FOSTER Portal

What to do:
- Search

News
- 'Experts on Open Access' and 'Science-Openness-World' interview series now available on FOSTER portal
- Report: CESSDA Research Data Management for Open Data doctoral training, July 2015, Ljubljana
- Registration now open for 'Software skills for your research' in Potsdam, Germany
- Go to the project website

Featured Topics
- Open Access
- Open Science
- Open Data
- Research Data Management
- Open Science Policies
- Funders policies
- Legal Issues
- Open Access Routes
The FOSTER Portal - Content/Resources

Open Data

Open Data are online, free of cost, accessible data that can be used, reused and distributed provided that the data source is attributed and shared alike.

Please sign in to subscribe to this topic

Navigation
Parent Topic
- Open Science

Sub Topics
- Open Big Data
- Open Data Definition
- Open Data Journals
- Open Data Standards
- Open Data Use and Reuse
- Open Government Data

COCOS - building a large scale cosmological simulation database
By Aleksander Nowiński
Publication year: 2013.

RepOD - a new Repository for Open Data in the scientific landscape of Poland
By Marta Hoffman-Sommer
Publication year: 2015.

A Novel Publication Pipeline for Life Science Data based on openBIS and CKAN
By Henry Lütcke
Publication year: 2013.
• All materials are free to use, and can be edited, repurposed, recombined to suit your own training needs.

• Many of these materials are being compiled into courses. [Work in progress.]
The FOSTER Portal - Events

Events

- **FOSTER-CESSDA training**: 01 Mar 2015 to 30 Nov 2015
- **Promoting Open Science among Young Researchers: Challenges and Opportunities (4 workshops)**
  - Kaunas University of Technology
  - KTU "Santaka" valley (K.Barlauskio st. 59, Kaunas) 1st conference room, Lithuania
  - 19 Mar 2015 to 19 Oct 2015
- **Software Writing Skills for Your Research**
  - GFZ German Research Centre for Geosciences
  - Helmholtz Centre Potsdam - GFZ German Research Centre for Geosciences
  - 22-23 September 2015
The FOSTER Portal - Courses (Work in Progress)

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COURSE: Open Science to Scientific Research
Intended audience Researchers, funders, research administrators, librarians Level:Introductory - no previous knowledge is required
The following course is a general introduction to the various components and philosophies of Open Science, that can directly enrich each step of the scholarly lifecycle (Open Notebook Science, OpenData, Open Research Software, Open Access). The overall objective of the course is to provide an introduction to why Open Science is essential to rigorous, reproducible and transparent research, as well as to future
FOSTER Training

CESSDA Research Data Management for Open Data doctoral training series: RESEARCH DATA MANAGEMENT AND OPEN DATA

The main goal is to promote open data in the research community and raise awareness about sharing research data and using existing research data. The course is designed for doctoral students from the field of social sciences and humanities.

Training consists of lectures and hands-on sessions focused on good Research Data Management practices and issues related to data sharing within the current EU frameworks, which foster open science.

Topics to be covered:
- Research Data Management
- Legal and Ethical Issues
- Depositing and Using Data

Teaching is delivered through a combination of presentations, exercises...
• Call 1 (March 2014 - for events in 2014)
  17 training programmes (over 70 events) in 13 countries (Belgium, Bulgaria, Croatia, Denmark, France, Germany, Greece, the Netherlands, Poland, Portugal, Slovenia, Spain and the UK)

• Call 2 (November 2014 - for events in 2015)
  24 training programmes from 18 countries (Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Spain and United Kingdom)
FOSTER Training Programme 2014-2015

- 40 Training Projects (100+ training events)
- 20 European countries
- Around 3,000 participants
## Training Toolkit

- Helping to create Training Events

- Suggestion: 6 TYPES OF TRAINING SESSIONS

<table>
<thead>
<tr>
<th>Audience</th>
<th>Expert talk</th>
<th>Talk by peers</th>
<th>Panel session</th>
<th>Workshop</th>
<th>Group work/Break-out sessions</th>
<th>E-learning</th>
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<tbody>
<tr>
<td>Students &amp; Academic Staff</td>
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<td>Administrators &amp; Librarians</td>
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<td>Research Project Managers</td>
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<td>Policy makers &amp; Funders</td>
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## Training Toolkit

### Attribution
Others can copy, distribute, display, perform and adapt your work if they credit your name as requested.

### No Derivative Works
Others can only copy, distribute, display or perform verbatim copies of your work.

### Share Alike
Others can distribute your work only under a license identical to the one you have chosen for your work.

### Non-Commercial
Others can copy, distribute, display, perform or adapt your work but for non-commercial purposes only.

### Location:
- Studio – eligible for introduction video’s
- Lecture hall – eligible for live colleges
- Lab – eligible for demo clips for interpretation of tests
- Outdoors – eligible for showing cases or examples

### Video Formats:
- Mp4, mpeg format, H264 HD 1080P, YouTube HD, Vimeo HD
# Learning Objectives

<table>
<thead>
<tr>
<th>TOPICS (following the Research Lifecycle)</th>
<th>CORE LEARNING ELEMENTS</th>
<th>LEARNING OBJECTIVES (as basis for a LEARNING PLAN)</th>
<th>STAKEHOLDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Science Definition</td>
<td>Define the concept of Open Science</td>
<td>Define relevance of OS tools to Reproducibility/Integrity of Research</td>
<td>Doctoral Students</td>
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<td>Identify OS tools for each step of the Research Lifecycle</td>
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<td>Apply OS concepts to your daily research processes</td>
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<td>Discuss OS &amp; Reproducibility role in Innovation &amp; Economic Growth</td>
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<tr>
<td>Open Reproducible Research</td>
<td>Define relevance to Reproducibility</td>
<td>Identity OS tools for each step of the Research Lifecycle</td>
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<td>Define relevance of OS tools to Reproducibility/Integrity of Research</td>
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<td>Justify Openness as a Reproducibility Tool</td>
<td>Apply OS concepts to your daily research processes</td>
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<td>Discuss OS role in Peer-Review Process</td>
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<td>Discuss OS &amp; Reproducibility role in Innovation &amp; Economic Growth</td>
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<tr>
<td>Open Big Data</td>
<td>Define Open Big Data concept</td>
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<td>Identify services based on Open Big Data</td>
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<td>Open Data Definition</td>
<td>Define Open Data</td>
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<td>Demonstrate the advantages of Open Data</td>
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<td>Open Data Journals</td>
<td>Identify existing Open Data Journals</td>
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Concluding Remarks

- There is a vast need for training and support for open scholarship (both for researchers, and supporting staff - librarians, repository managers, etc.)

- There is already an enormous amount of training contents/resources and initiatives/events/courses on open science

- How can we build sustainable and trusted community infrastructure(s) to support the curation, dissemination and re-use of OS related training resources?
Thank you

• Website:
  - www.fosteropenscience.eu

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