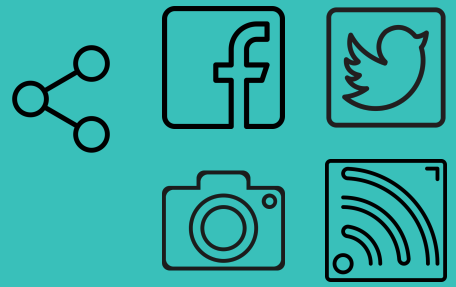
creative commons



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The Open Science MOOC

1st UNESCO Capacity Building WG Meeting
12th May 2022

pcmasuzzo
paola.masuzzo@gmail.com

Hi, I am Paola! I am a data scientist, Open Science advocate and independent researcher at IGDORE

IGDORE
Institute for Globally Distributed Open Research and Education

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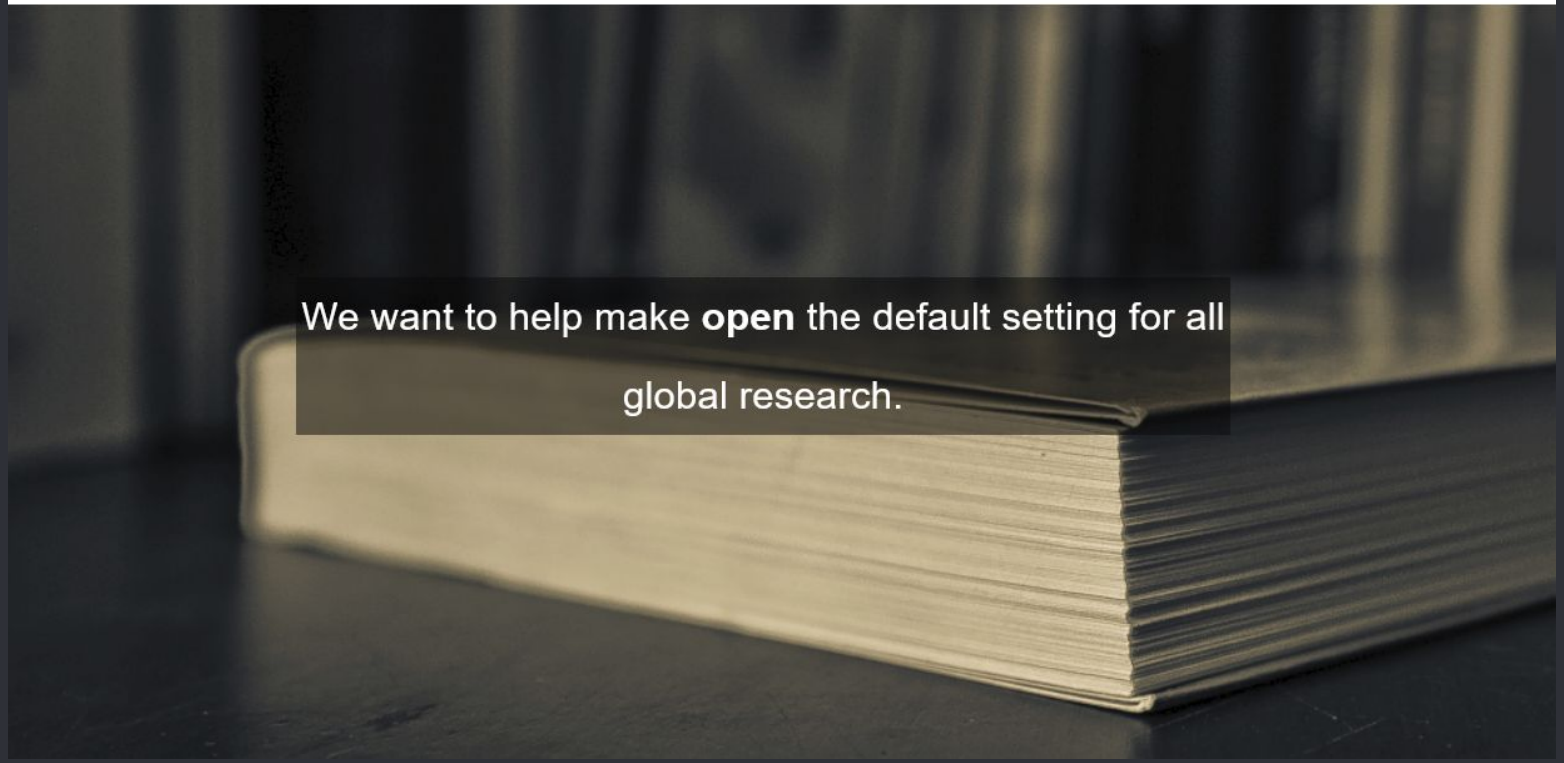
https://opensciencemooc.eu/



how it all started

Jon Tennant
May 6th, 1988 - April 9th, 2020

21st August 2017

Dear Sirs and Madams,

We are writing on behalf of the Open Science MOOC, a platform we are building for students and researchers to learn the skills they need to thrive in a modern, Web-based research environment. Our vision is to create a modular educational resource that can be fully integrated into graduate schools around Europe, and further.

We are writing to you to express a statement of interest, inspired by the publication of two recent reports by the EU Commission: Evaluation of Research Careers fully acknowledging Open Science Practices and Providing researchers with the skills and competencies they need to practise Open Science. In these reports, the European Commission recognises the urgency to make open science part of standard research excellence training[1] and taking into account Open Science track record in the tenure and research evaluation for individuals[2] and institutions. In the case of R1 and R2 researchers, it should be mandatory for universities and research organisations to offer these as part of their training.

Yours sincerely,
Dr. Jonathan Tennant, Dr. Paola Masuzzo, Dr. Ivo Grigorov (on behalf of the Open Science MOOC team)

We want to help create a welcoming and supporting community, with good tools, teachers, and role-models, and built upon a solid values-based foundation of freedom and equitable access to research.

- the strength lies with the community

1.8k users

Open MOOC-ers

1.7k followers

Open Science MOOC | Facebook

more than 9k followers

@OpenScienceMOOC

Strong interest and engagement from early career researchers and students

the Open Science MOOC moves to IGDORE

Many IGDORE affiliates are active at ***On Science & Academia*** – an open forum for researchers, students, and the science-interested public – join us, everyone is welcome! https://onscienceandacademia.org/

Education Working Group

IGDORE
Institute for Globally Distributed Open Research and Education



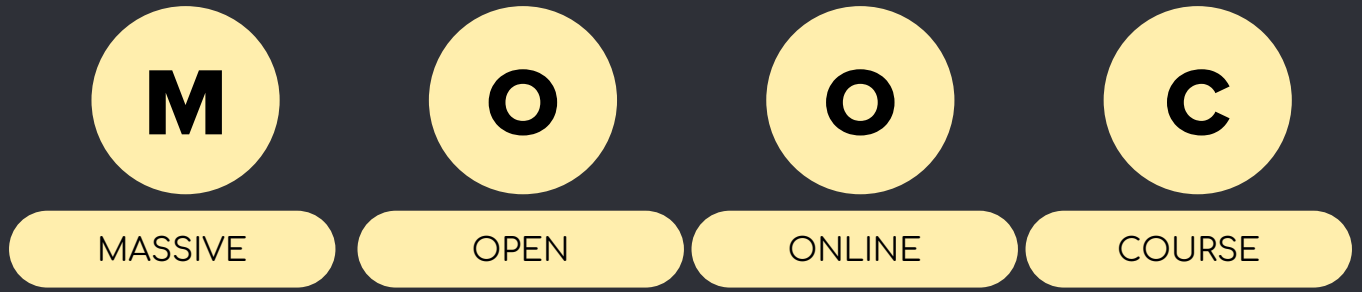






https://opensciencemooc.eu/community/2022/02/25/moving-to-igdore/

why a MOOC?



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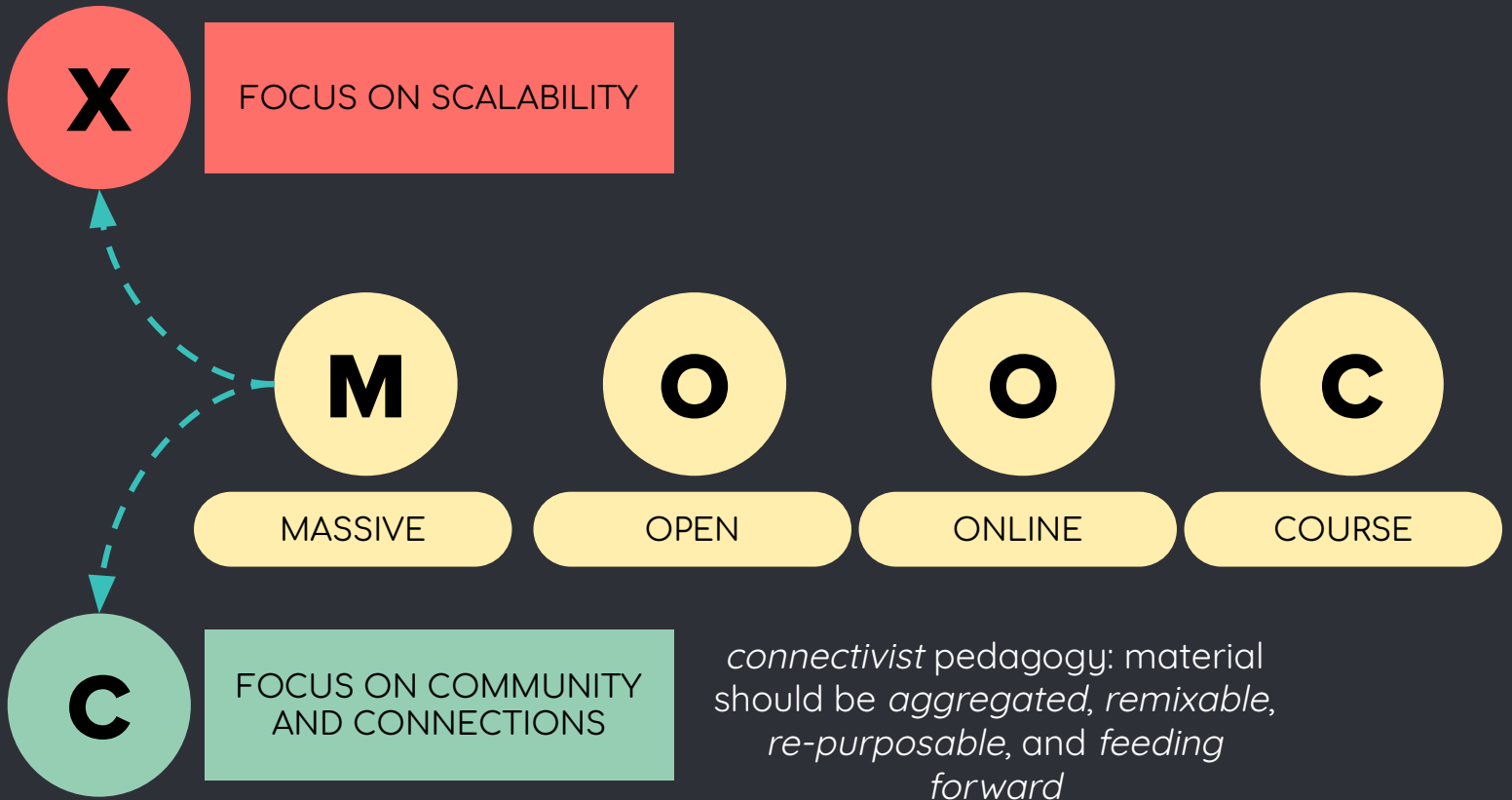


connectivist pedagogy: material should be *aggregated*, *remixable*, *re-purposable*, and *feeding forward*

why a MOOC?

- Multidisciplinary
- Multicultural
- Multilingual

- Open licences
- Free of charge
- Retain, reuse, remix, redistribute

- Self-paced
- Collaborative development & learning

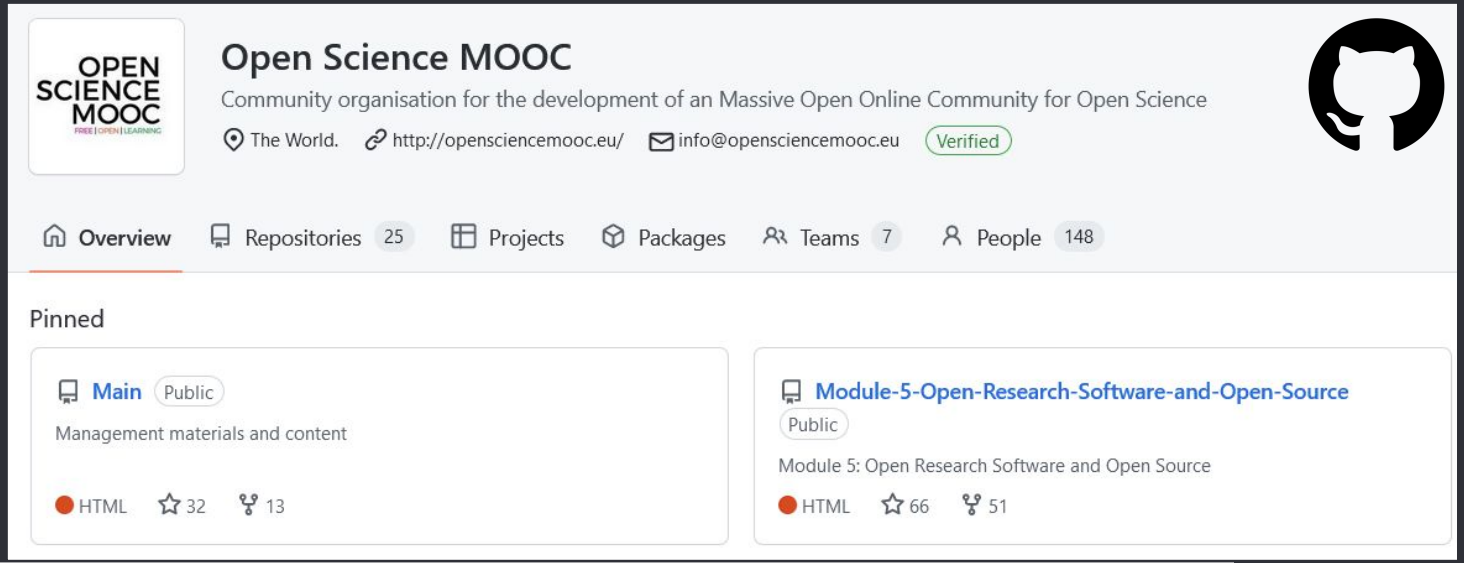
M MASSIVE

O OPEN

O ONLINE
- Accessible
- Interactive

C COURSE

- collaborative development



Contribution Guidelines

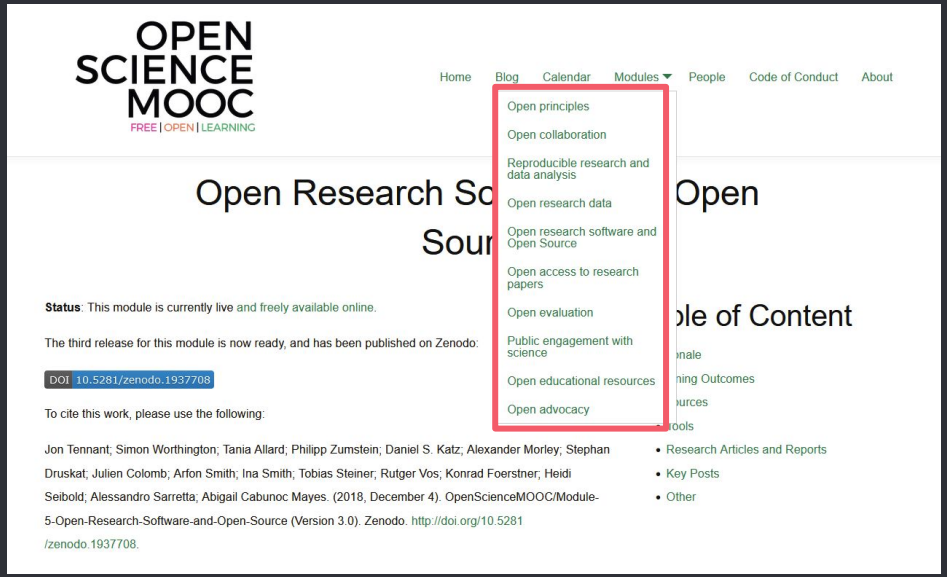
These are the main contributing guidelines for the development of this MOOC, and apply to each module within. The development structure for this is based on a combination of two things:

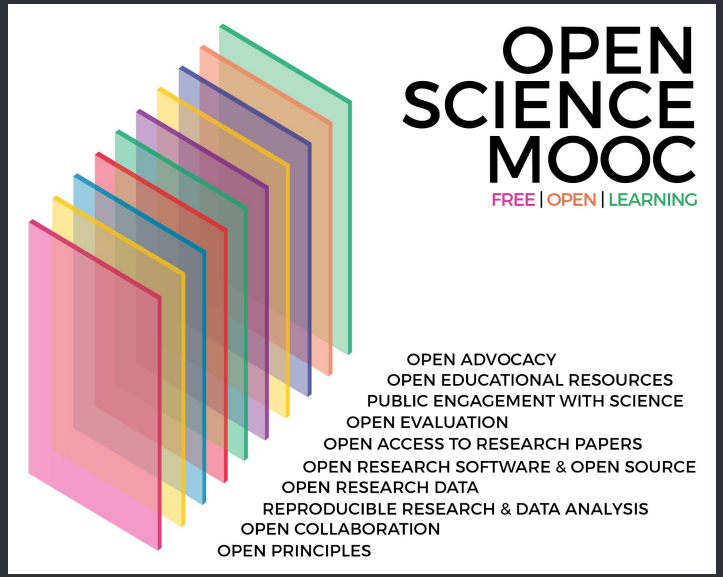
1. Invited experts as part of a core development team, led by one or two managers for each module.
2. Open participation, where anyone can contribute using the standard processes on GitHub.

https://github.com/OpenScienceMOOC

modular approach

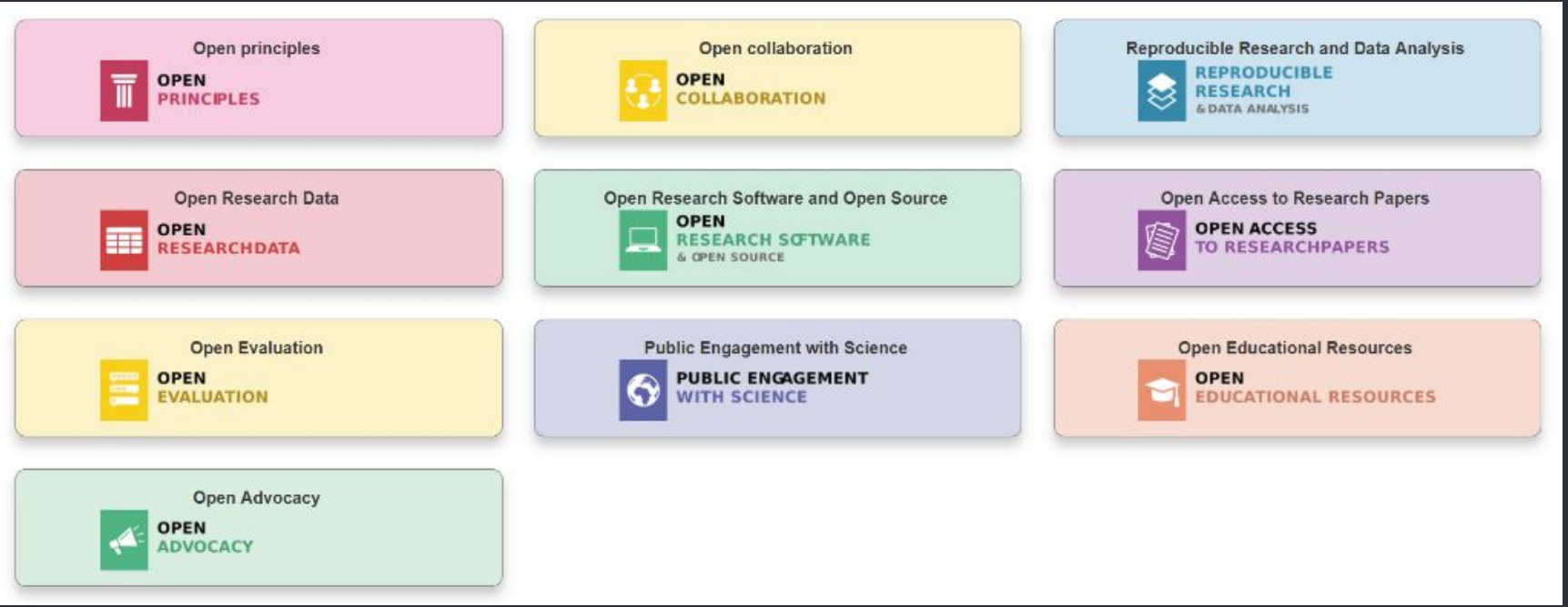
rationale, learning outcomes
resources, key posts, research articles & reports, tools, best practices
content development, production toolkits, tasks & quizzes



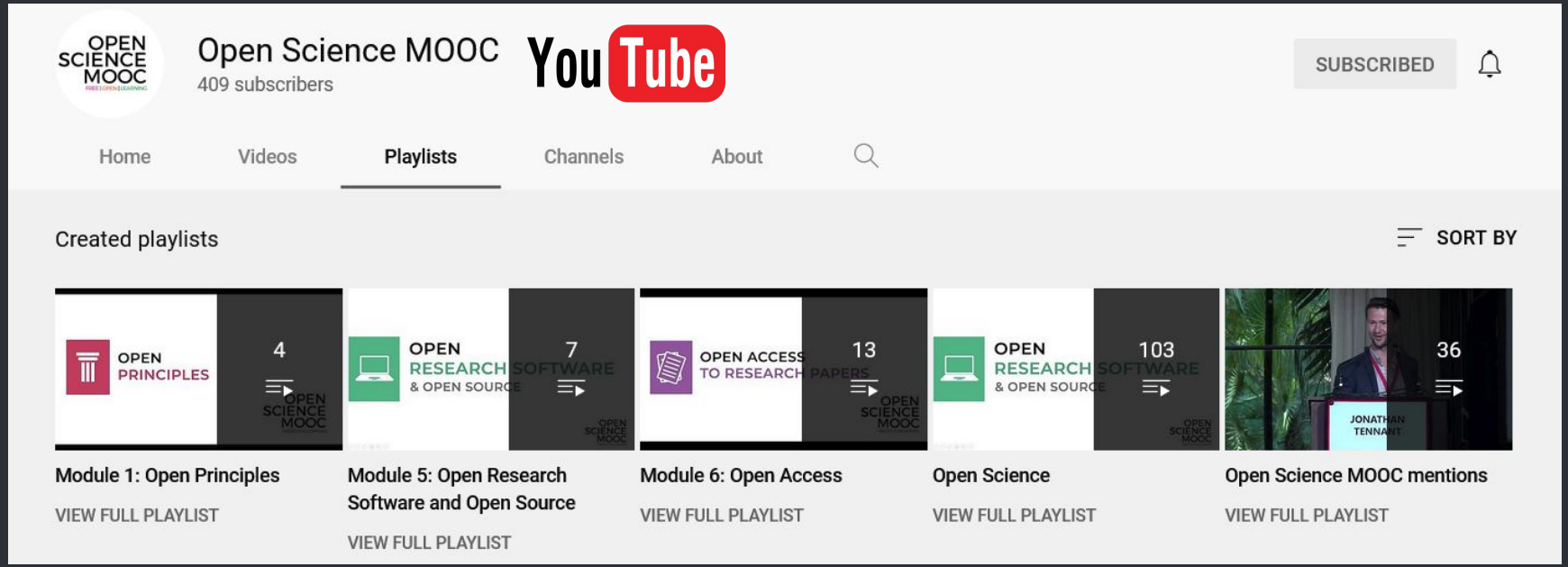


https://opensciencemooc.eu/

- modular approach



- videos introduce & complement the modules' production toolkits



https://www.youtube.com/channel/UCuRYnv28aGLz6iyxduJhf9g/playlists

mission & plans

promotion to the scientific community & sustainable, open choice of a hosting platform for enrolling & distribution

leverage current partnerships & explore new ones

financial support

foster new collaborations

create & nourish a community where diversity, inclusion & inclusiveness are non-negotiable

content development: updating existing modules & producing new ones

enable multidisciplinary, multilingual & multicultural participation

Thank you!

You can find me at
@pcmasuzzo
paola.masuzzo@gmail.com

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https://opensciencemooc.eu/
education@igdore.org

Access Courses
Put Open Science into practice with our Open Science training toolkit. Our courses are authored by experts and experienced educators.

Earn Badges
Get recognised for taking our courses and follow our learning paths to specialisations.

Participate
Join our community of trainers and access our Trainers' Corner.

Promote Open Science
Use the Open Science training handbook. In a variety of formats and languages.

FOLLOW OUR LEARNING PATHS:

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

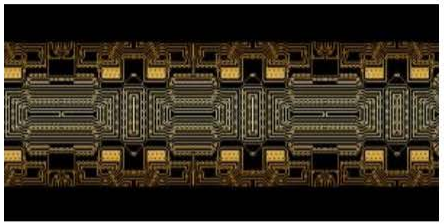
Research and Data ethics

This course covers research data ethics, along with basic data...

Openness in Science and RRI

This introductory course will help you to know the concepts of Open Science and RRI, key principles and the implications for practicing research.

Upon completion of this course, you wi...



Open and FAIR Research Data

This course explains the difference between open data and FAIR...

Introduction to Responsible Research and Innovation

This introductory course will help you to understand what Responsible Research & Innovation (RRI) means, where it has come

Engaging the Public in Responsible Research and Innovation

The course will help understand and justify the importance of public engagement as a key

Responsible Research and Innovation for Companies

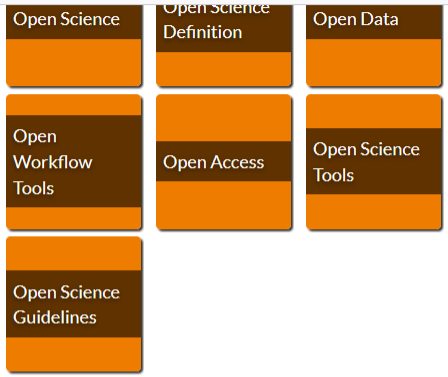
carry out your research in a more transparent and collaborative way. Open Science applies to all research disciplines. While Open Science is the most commonly used term, you may also hear people talking about Open Scholarship or Open Research in the Arts and Humanities.

For a citable version or to use this course offline, please refer to the print version which is available from Zenodo.

Haga el curso en español

Start the Free Course

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



Audience

Librarians and Repository managers

Researchers and Students

Research Administration

PHD Students

Researchers and Students

Reuse this course

If you want to use this course in your LMS.

Download SCORM .

Comprendre la science ouverte

https://callisto-formation.fr/course/view.php?id=187

Description du cours "Comprendre la science ouverte"

Ce cours a été créé à partir du MOOC FOSTER Open Science et adapté à la France.
FOSTER définit la science ouverte comme le mouvement visant à rendre la recherche, les données et la communication scientifique accessibles à tous les niveaux d'une société qui s'interroge.
Mais que signifie la science ouverte (SO) dans la pratique ? Ces 9 leçons sur la science ouverte répondent à certaines des questions les plus courantes que vous pourriez vous poser sur la mise en pratique de la science ouverte. Les leçons comprennent des conseils pour commencer à pratiquer la SO ainsi que des informations sur les outils et les ressources spécifiques à la discipline que vous pouvez utiliser.
Ce cours a été pensé et conçu pour être suivi :
• Soit de façon linéaire et progressive ;

https://www.fosteropenscience.eu/content/open-science-training-handbook
https://open-science-training-handbook.github.io/Open-Science-Training-Handbook_EN//

The Open Science Training Handbook

A group of fourteen authors came together in February 2018 at the TIB (German National Library of Science and Technology) in Hannover to create an open, living handbook on Open Science training. High-quality trainings are fundamental when aiming at a cultural change towards the implementation of Open Science principles. Teaching resources provide great support for Open Science instructors and trainers. The Open Science training handbook will be a key resource and a first step towards developing

Open-Science-Training-Handbook

FOSTER Open Science Training Handbook

https://github.com/Open-Science-Training-Handbook

Popular repositories

Open-Science-Training-Handbook_EN — Public

Main handbook content divided into chapters.

☆ 41 ⑂ 45

Open-Science-Training-Handbook_PT — Public

Portuguese language version e-book available at https://book.fosteropenscience.eu/pt/

☆ 15 ⑂ 8

Open-Science-Training-Handbook_ES — Public

This will be the Spanish version of the handbook.

☆ 7 ⑂ 11

Open-Science-TrainingHandbook_EL — Public

This will be the Greek version of the handbook.

☆ 2 ⑂ 19

Open-Science-TrainingHandbook_FR — Public

In this repository the OSTH will be translated into French.

☆ 2 ⑂ 4

Open-Science-Training-Handbook_IT — Public

This will be the translation of the OSTH to Italian.

☆ 2 ⑂ 13

People

Top languages

JavaScript

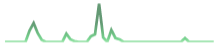
Open-Science-Training-Handbook_SK Public

This will be the Slovak translation of the Open Science training handbook.

1 CC0-1.0 0 0 1 Updated 28 days ago

-Open-Science-TrainingHandbook_TUR Public

In this repository the OSTH will be translated into Turkish.



1 CC0-1.0 0 0 0 Updated on Mar 21

Open-Science-Training-Handbook_EN Public

Main handbook content divided into chapters.

41 45 12 4 Updated on Jun 18, 2021

Open-Science-Training-Handbook_UA Public

0 CC0-1.0 0 0 0 Updated on Jun 18, 2021

Open-Science-Training-Handbook_ES Public

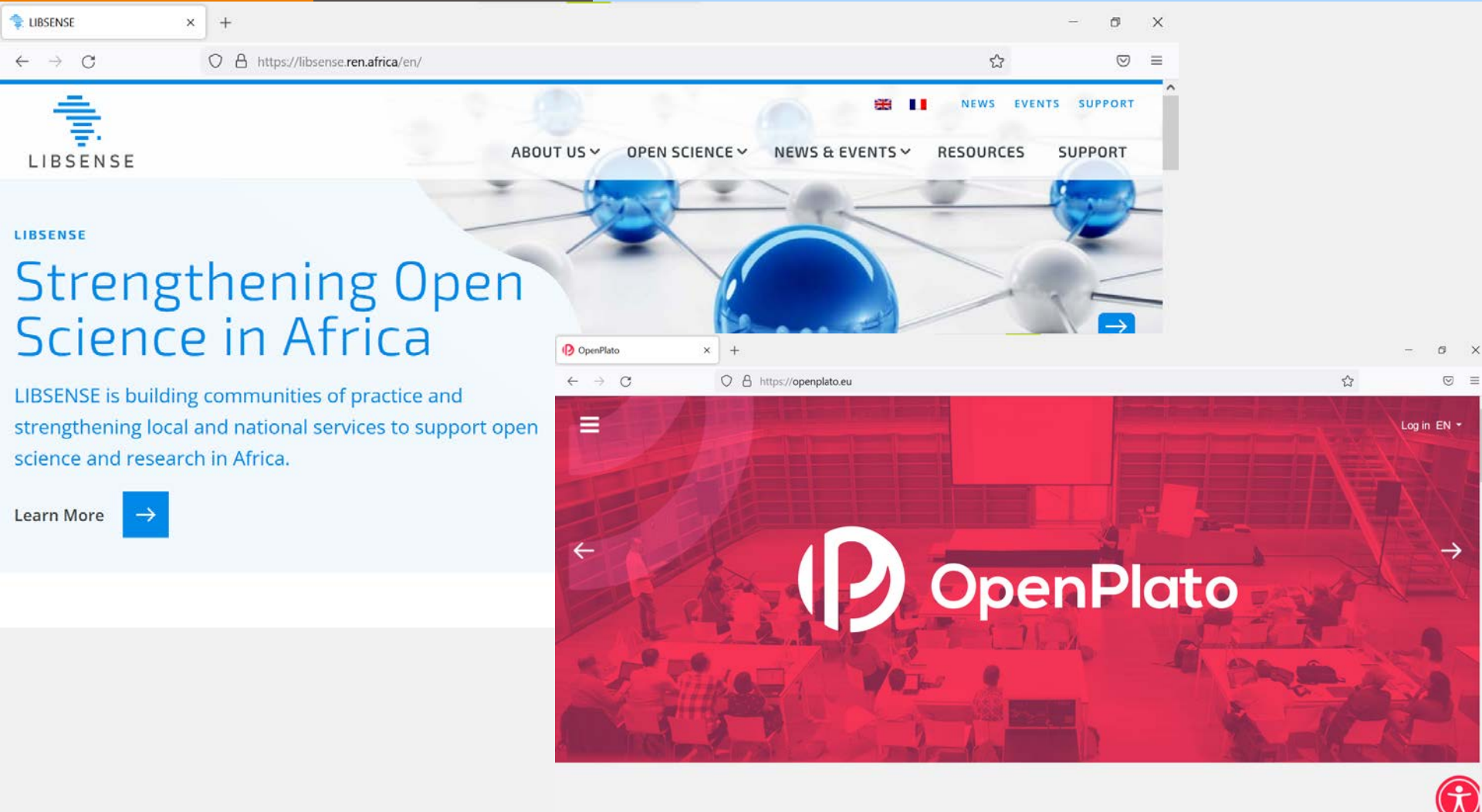
This will be the Spanish version of the handbook.

7 11 26 9 Updated on Jun 14, 2021

Open-Science-Training-Handbook_PT Public

Portuguese language version e-book available at https://book.fosteropenscience.eu/pt/

15 8 0 0 Updated on Jun 14, 2021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LA Referencia Training Activities 2020-2022

LA Referencia
Red de repositorios de acceso abierto a la ciencia

LA Referencia: Latin America Open Science Repository Network

Open Science Repository Network formed by an association of government authorities of Science, Technology and Innovation, founded on 2012 through the signing of a Cooperation Agreement, as a result of the project financed by the IDB (2010-2013).

MISSION: To give visibility to the **public funded scientific production** in Latin America, through the cooperation and articulation of a **federated network** of institutional and data repositories, based on **regional agreements and national open access strategies.**

In this context, scientific production is understood **not only as the literature** but also as the data and metadata of the inputs, products and processes of scientific research work.

LA Referencia Members 2022

- OpenAIRE / OpenAIRE 4.0 Guidelines / OpenAIRE Graph / Usage statistics
- COAR: international alighment
- DSpace / Vivo – MOU LYRASIS
- Research Data
- CRIS Systems
- MoU NREN´s Africa
- RCAPP - MoU FCT/FCN / Colaboración Univ. Minho
- Indicators and research assesment

LA Referencia
Red de repositorios de acceso abierto a la ciencia

Red CLARA
Cooperación Latino Americana de Redes Avanzadas

LA Referencia/ RDA US MoU

In September 2021, an MOU was signed with the RDA Americas specific objectives regarding training:

- **Facilitate national and international commitments**, participation into working groups to address problems related to research data for LA Referencia and RedCLARA research community and the general public.
- **Promote the organization of events and trainings** to support the adoption of best practices in research data management in Latin America and Spain.
- **Support the development of shared services and common standards**, including the development of policies, capacities, and infrastructure interoperability
- Promotion of regional adoption of RDA recommendations with the support of RDA
- **Facilitate the availability of RDA content in the languages of the region**, Spanish and Portuguese.

LA Referencia RDM internal WG: Survey on Training

This group launched a survey inside their science and technology organizations in order to identify topics of interest for training activities.

- Model and registration of research data types
- Research data repositories (interoperability and requirements)
- Dataverse instalation workshops
- Metadata standards for documenting research data
- Basic knowledge of research data science
- Legal interoperability of research data: Principles and Guidelines for implementation
- Research Data Policies for Scientific Journals and Publishers

LA Referencia/RDA 2020/2021 Trainings

During 2020 and 2021, a series of trainings related to research data management were organized

- Management and planning of research data in scientific practice
- National and Regional Strategies in Open Science
- Data Science Professionals in the Academy: What do they do and what can they do in the future?
- What is a Data Steward?

2022 Selected RDA Trainings (to be translated / interpreted)

May	Thursday 19 May 16:00 UTC	Persistent Identification of Instruments WG
June	Thursday, 23 June Time 14:00 TBD	Professionalising Data Stewardship IG
July	Offered July or Aug	Exposing Data Management Plans WG
September	Time/Date TBD	CURE-FAIR WG
October	Time/Date TBD	Research Metadata Schemas WG
November	Time/Date TBD	DMP Common Standards WG

LA Referencia Resource Center

In May/June 2022 LA Referencia will launch an online resource center, this website will contain all the past and future training outcomes: videos, presentations, documents. All contents will be tagged according different user profiles Researchers, Information Managers, Open Science Software developers, etc .

At first it will include the past training videos and Spanish/Portuguese translations series of cards on research data provided by the RDA

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Explore otras categorías

Nuestros últimos recursos

Mostrar 2(recursos de capacitación por página

Buscar:

Título	Categoría	Fecha de Fecha de Publicación	Descargar
Sesión de Preguntas y Respuestas: Planificación de Datos de Investigación 1 0 download	Datos de Investigación, Gestión de la Información, Investigación y Ciencia Abierta, Tecnología y Ciencia Abierta	March 11, 2022	DOWNLOAD
Sesión de Preguntas y Respuestas: Gestión de Datos de Investigación en la práctica Científica 1 0 download	Datos de Investigación, Gestión de la Información, Investigación y Ciencia Abierta, Tecnología y Ciencia Abierta	February 20, 2022	DOWNLOAD
Modelos empresariales sostenibles con base en software de intermediación para apoyar la interoperabilidad de la investigación 1 1 download	RDA	April 5, 2022	DOWNLOAD
Interoperabilidad legal de los datos de investigación: Principios y Directrices de aplicación 1 40 downloads	Datos de Investigación, Gestión de la Información, Investigación y Ciencia Abierta, RDA	March 11, 2022	DOWNLOAD
Gestión de Datos de Investigación – Parte II 1 0 download	Datos de Investigación, Gestión de la Información, Investigación y Ciencia Abierta, Tecnología y Ciencia Abierta	February 20, 2022	DOWNLOAD

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LA Referencia is Open Access

LA Referencia is Open Science

LA Referencia is Open to collaboration

You are all welcome !

"Our strength is the acknowledgement and respect of the differences as a foundation of international collaboration"

Open Science Capacity Building in Africa

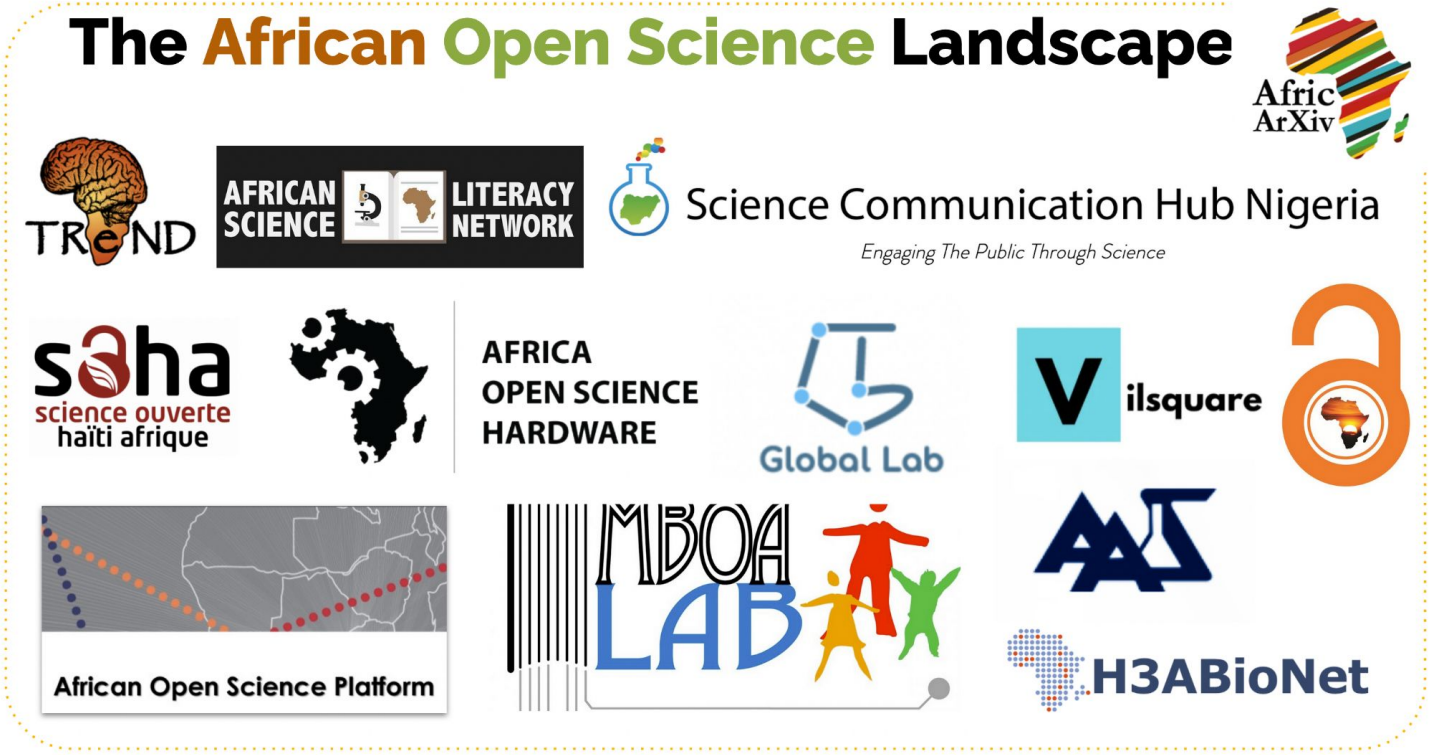
Training Centre in Communication
Train. Support. Empower

AfricArXiv

Access 2
Perspectives

doi: 10.5281/zenodo.6542799

Open Science: Definition and Scope



Open Scientific Knowledge

Open Access incl. Open Peer Review

Open Research Data

Open Educational Resources

Open source software/source code

Open Hardware

Open Access

UNIVERSITY OF CAPE TOWN
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AFRICAN JOURNALS ONLINE
AJOL

Training Centre in Communication
Train. Support. Empower

Afric ArXiv

Access 2 Perspectives

https://info.africarxiv.org/african-digital-research-repositories/

LIBSENSE
STRENGTHENING OPEN SCIENCE IN AFRICA

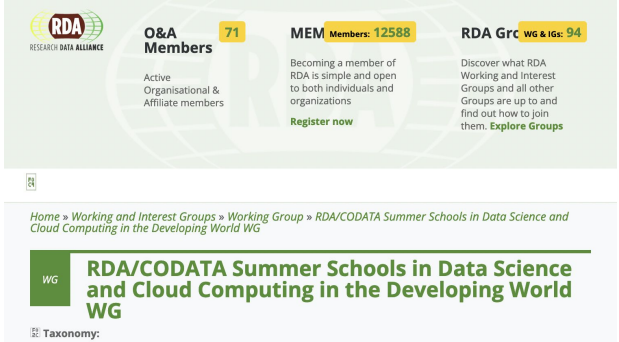
WACREN | UbuntuNet Alliance | ASREN | GÉANT | Africa Connect 3
The University Of Sheffield. | COAR Confederation of Open Access Repositories | eifl | NII | OpenAIRE

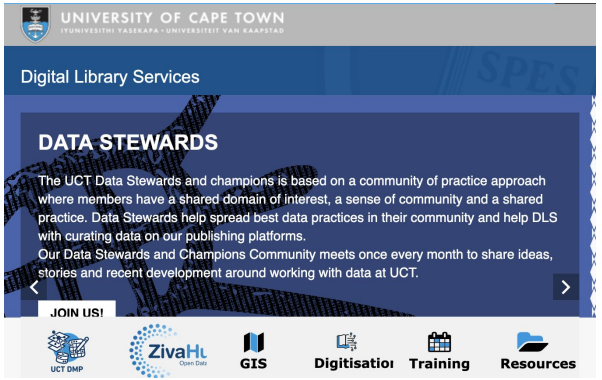
university of south africa
UNISA

OA webinars

Open Peer Review

Open Source / Open Code / Open Data





National Research Foundation | South African Radio Astronomy Observatory

Open Hardware

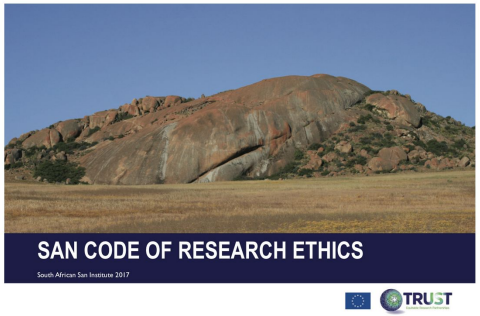
STICLab
THE HOUSE OF INNOVATION

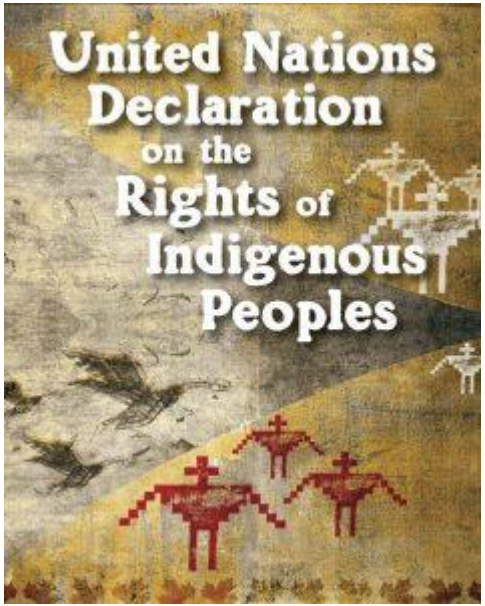
TReND

AFRICA OPEN
SCIENCE HARDWARE
SUMMIT

Kumasi Hive

Open Science and Indigenous Knowledge Systems





Open Science and Engagement of Societal Actors

Global Lab Network

Ghana's open science and innovation community

Open Science Infrastructures

African NRENs

Work in progress

A	B	C	D	E	F	G	H
Label	**URL**	**Description**	**Open Science aspect**	**Host Institution**	**Country**	**related**	**related 2**
TCC Africa training	https://africarxiv.pubpub.org/tcc-africa / https://www.tcc-africa.org/portfolio/ https://www.tcc-africa.org/resource/		Open Access|Open Science|Scholarly Communication	**TCC Africa**	Kenya	https://www.tcc-africa.org/courses/	https://www.tcc-africa.org/advancing-open-science-in-africa-three-organizations-collaborate-to-increase-awareness-and-education/
Access 2 Perspectives community	https://access2perspectives.org/community/		Open Science|OpenAccess|Open Research Data		Germany		
Writing Hub Africa training	https://writinghubafrica.co.ke/		Open Access|Open Research Data	**Writing Hub Africa**	Kenya		
AfricArXiv resources & events	https://info.africarxiv.org/eider-africa-prereview-africarxiv-and-tcc-africa-develop-a-course-to-involve-more-african-researchers-in-peer-review/		Open Access|Open Peer Review	**AfricArXiv, TCC; Eider Africa, eLife, PREreview**	Kenya |various		
LIBSENSE Open Science resources and public events	https://libsense.ren.africa/en/open-science/		Open Acess	**LIBSENSE**	Nigeria	https://zenodo.org/record/6467301#.Ynqds2BByVQ	
The Carpentries in Africa	https://carpentrieshandbook.readthedocs.io/en/latest/topic_folders/regional_communities/african_task_force.html		Open Research Data|Open Source	**The Carpentries in Africa**	South Africa		
UCT Libraries - Research and Learning resources	http://www.researchsupport.uct.ac.za/why-open-science			**UCT Library**	South Africa		
UCT Research Data Services: Presentations, Workshops and Events	http://www.digitalservices.lib.uct.ac.za/dls/documentation-0	The Digital Library Services department in the Information Systems & Resources division of UCT Libraries provides regular capacity building engagements, not only passively by appointment (which is being used extensively), but also through an actively developed and run workshop programme called the "Digital Scholar series," open to the public, throughout the academic year.	Open Research Data	**University of Cape Town: Digital Library Services**	South Africa	https://osf.io/cz2sd/	https://uct.ac.za.libcal.com/calendar/libraryevents?t=g&q=Digital%20Scholar&cid=497&cal=497&inc=0
	https://africaosh.com/		Open Hardware	**AfricaOSH**			
	https://trendinafrica.org/		Open Hardware	**TReND in Africa**			

https://docs.google.com/spreadsheets/d/1Nl_GdPen4kX3oDBQPI3kF-_FQGJXfO5uHUgPJMRwl0g/

Contributors so far

- Louise Bezuidenhout, DANS
- Joy Owango, TCC Africa
- Niklas Zimmer, UCT Digital Library
- Jo Havemann, Access 2 Perspectives & AfricArXiv

Open Syllabus: UNESCO Recommendation on Open Science

Jennifer M. Miller, PhD
Developed for Open Education for a Better World (OE4BW)
with project mentor Geoff Cain

SDG 17

Working Group on Open Science Capacity Building
May 12, 2022

A course to reach early career researchers (ECRs)

Seeking STEM faculty, open science champions

Image credit: "2008 Ethics in the Science Classroom (Summer Workshop)" by NWABR is licensed under CC BY 2.0

Potential audiences

- Special topics courses by STEM faculty open science champions for a lab or academic department
- Maymester or Summer Session for incoming or prospective STEM graduate students
- Community college courses for current or retired STEM educators and practitioners

Recommendation

UNESCO Recommendation on Open Science.

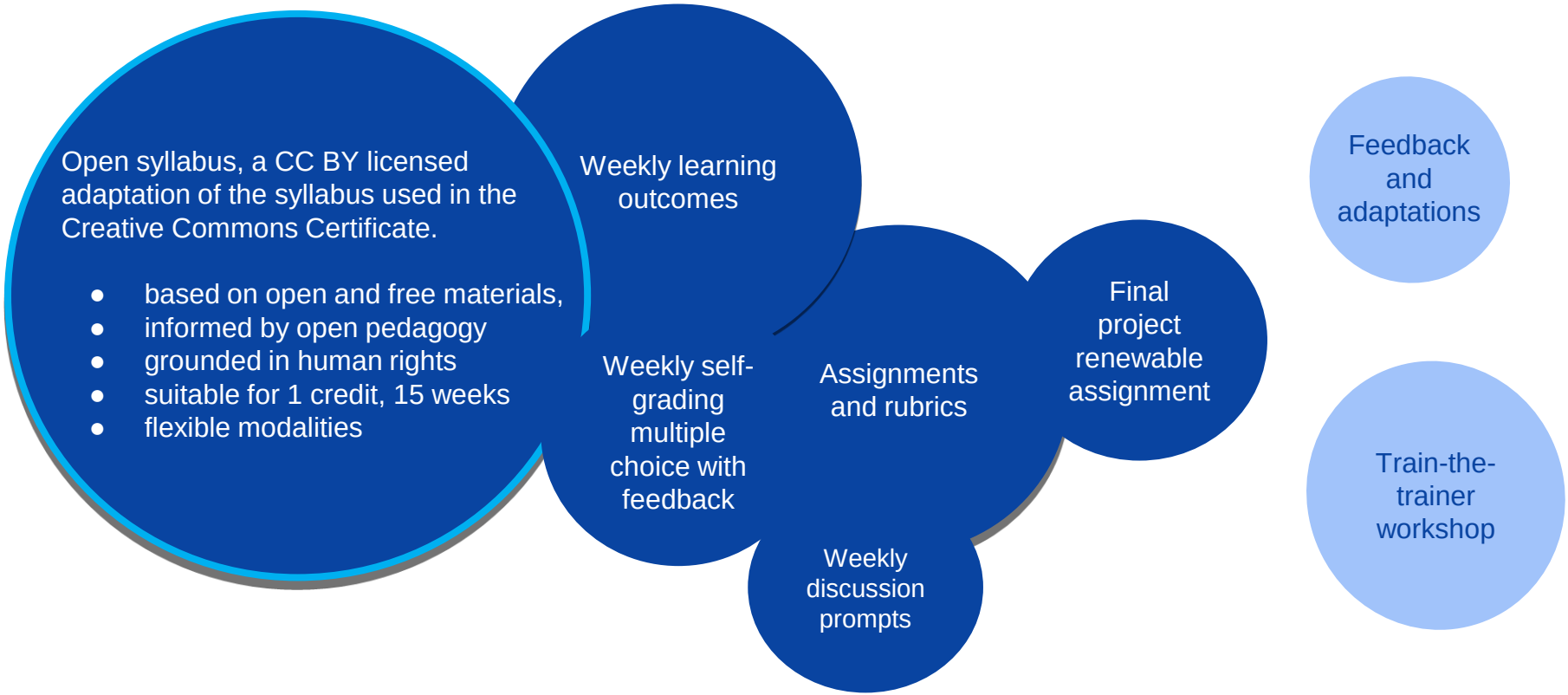
SDG 17 Partnerships for the Goals

Strengthen the means of implementation and revitalize the global partnership for sustainable development

Problem

How will Open Science reach early career researchers “at the bench”?

An open syllabus for teaching Open Science through the lens of the UNESCO Recommendation on Open Science

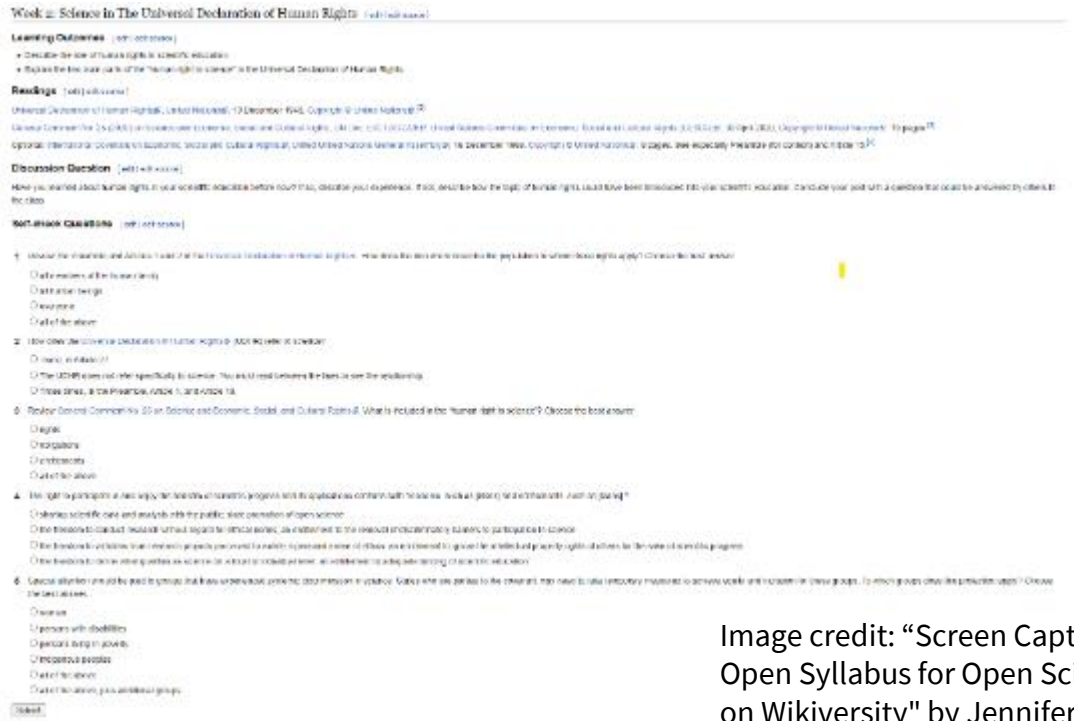


Dark blue: Hosted now on Wikiversity and Zenodo.
Light blue: Ongoing, coming in July

Wikiversity UNESCO Recommendation on Open Science

https://en.wikiversity.org/wiki/UNESCO_Recommendation_on_Open_Science

- Learning Outcomes
- Readings
- Discussion Question
- Five self-check multiple choice questions per week
- Links to materials hosted on Zenodo



Miller, Jennifer. (2022). Open Syllabus: UNESCO Recommendation on Open Science (1.0). Zenodo. https://doi.org/10.5281/zenodo.5823531

Miller, Jennifer. (2022). Question Bank for Open Syllabus UNESCO Recommendation on Open Science (1.0) [Data set]. Zenodo. https://doi.org/10.5281/zenodo.5832063

Next steps

- ❏ Currently seeking faculty interested in adopting the course.
- ❏ Train-the-trainer workshop “Prepare to Teach Open Science Through the Lens of the UNESCO Recommendation” at FORCE11 Scholarly Communication Institute (FSCI2022) July 26-28, 2022.
- ❏ Consider offering train-the-trainer workshops in other settings.
- ❏ Adapt syllabus for additional contexts: geography, discipline, setting.

Open Syllabus: UNESCO Recommendation on Open Science

Available on Wikiversity and Zenodo

To collaborate on adoption or adaptation of this open educational resource, contact **jennifer.moore.miller@gmail.com**

SDG 17

Capacity Building for Open Science

In Asia and the Pacific Region

12 May 2022

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Introduction

- Open Science, transition in scientific enterprise (research values as well as practices), requiring new knowledge, skills, and mindsets of PEOPLE

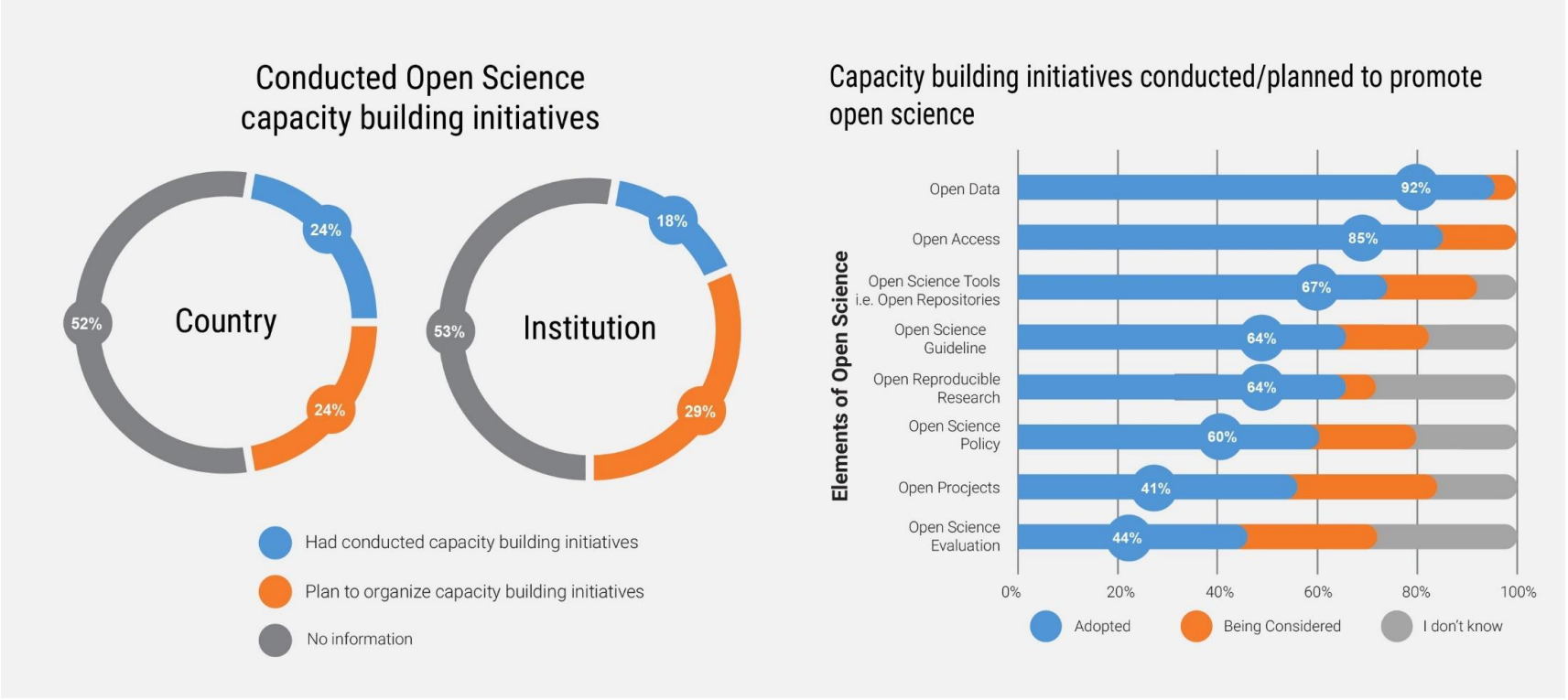
- Asia and the Pacific, fast-growing areas in population, education, etc. w/ maintaining diverse languages, ethnicities and cultures

Previous/Ongoing Activities

- **Capacity Building for Open Science discussed in Asia and the Pacific**
  - Regional Multi-stakeholder Workshop in 2020, organized by the UNESCO Regional Science Bureau for Asia and the Pacific (UNESCO Jakarta Office) in September 2020
  - APEC PPSTI's Policy Sharing Webinar, co-organized with ISC-ROAP (International Science Council Regional Office for Asia and Pacific) in August 2020
  - Annual meetings organized specialized regional networks (e.g. COAR, APRI, APAN, and so on)
  - STEPAN (Science, Engineering, Technology and Innovation Policy Asia and the Pacific Network), resumed in 2021 with setting a key action area on open science

Facts and Thoughts for Near Future (I)

- UNESCO Regional Science Bureau for Asia and the Pacific's survey, conducted right after the Regional Multi-stakeholder Workshop in 2020



Facts and Thoughts For Near Future (2)

- Organizational and institutional capacities to implement open science beyond technical skills and digital literacy

- A clustered approach to scale up current capacity building initiatives and connecting them each other based on similarities
  - contribution of UNESCO as a glocal hub