

How can open science help to improve education ?

## OPEN SCIENCE

### What is Open Science ?

"...An inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community. It comprises all scientific disciplines and aspects of scholarly practices, including basic and applied sciences, natural and social sciences and the humanities, and it builds on the following key pillars: open scientific knowledge, open science infrastructures, science communication, open engagement of societal actors and open dialogue with other knowledge systems..." **UNESCO Recommendation on Open Science, 2021**

### European Union Open Science Policy

"Open science is a policy priority for the European Commission and the standard method of working under its research and innovation funding programmes as it improves the quality, efficiency and responsiveness of research. When researchers share knowledge and data as early as possible the research process with a relevant actors it helps diffuse the latest knowledge. And when partners from across academia, industry, public authorities and citizen groups are invited to participate into research and innovation process, creativity and trust in science increases..." **European Commission**

### Open Science in Horizon Europe

"Horizon Europe will set a new standard for dissemination of knowledge and new skills across European societies. With clear and immediate open access requirements for beneficiaries, the Open Research Europe publishing platform and a strengthened European Open Science Cloud, we are well underway in making truly open science a reality". **Mariya Gabriel Commissioner for Innovation, Research, Culture, Education and Youth**

### Open Science Practices

Open access to research outputs such as publications, data, software, models, algorithms, and workflows; early and open sharing of research; use of open research infrastructures for knowledge and data sharing; participation in open peer-review; measures to ensure reproducibility of results; Open collaboration within science and with other knowledge actors, including involving citizens, civil society and end-users, such as in citizen science.

### Open Science in EELISA innoCORE

EELISA innoCORE proposed the development of Open Science through Work Package 3. To create a roadmap, the work package focused on four main dimensions: (1) Open Access and research data management; (2) Open science skills and education; (3) Open science incentives and awards; (4) Citizen science. The main aim is to ensure the full integration of Open Science into the EELISA ecosystem.

## EELISA OPEN SCIENCE COMMUNITY

### Objectives

- to advocate and raise awareness of open science
- to promote the systematic development of the open science ecosystem across disciplines
- to bring together and work with all beneficiaries, stakeholders and experts to ensure society gets the most out of science through the policies, strategies and tools developed by EELISA to be part of the open science ecosystem.
- to share the knowledge and best practices within and between other EELISA communities and European open science societies/working groups
- to bring together professionals from different fields/disciplines under training, workshops and working groups to support and develop the open science skills of EELISA partners

### Principles & Tools

During its work, the eight ambitions of the EU open science policy will be followed and the Community will promote the use of tools and services provided by the European Open Science Cloud (EOSC).

### Come & Join Us!

If you are an academic, researcher, student, librarian or innovator interested in working on open access publishing, open research data, open research software, institutional repositories, open educational materials, or open science-based academic assessment methods, your contribution to this community will help create a culture of openness within EELISA.

### Contact Information

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Let's strengthen research, education and innovation together through open science practices to increase efficiency and productivity.

**"By the power of open science, we now have the power"**

## SDG

4 QUALITY EDUCATION



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



## HORIZON EUROPE AREA(S)

Culture, creativity and inclusive society

Next generation metrics

## RESEARCH INTEGRITY

Reproducibility

Ethics

Personal Data

Research integrity ensures the reproducibility of the research, trusting that the methods used follow scientific standards. Publishing your research in open access introduces transparency to your research.

## FAIR DIGITAL OBJECTS

Open Data Open Access

Open Source

FAIR is the acronym of Findable, Accessible, Interoperable and Reusable. It allows to facilitate the reusability, as well as its reproducibility.

## OPEN EDUCATIONAL MATERIAL

MOOC Presentations

Videos

"OED are learning, teaching and research materials in any format and medium that reside in the public domain". **UNESCO**

It allows universal access to educational material.

## SUSTAINABLE DEVELOPMENT GOALS (SDG)

4 QUALITY EDUCATION



"SDG4 aims at ensuring that by 2030 all girls and boys around the world receive an inclusive and equitable quality education, and promoting lifelong learning opportunities to help adults develop new skills and break the cycle of poverty". **UNITED NATIONS**

Researchers can obtain rewards making their research reproducible and creating open FAIR digital objects. These rewards could be used to assess their career.

Academicians are in charge of transforming the FAIR digital objects created by researchers in open educational material adapted for students. These actions could be rewarded and form part of the curricula

Students are benefited to an universal access to open educational material, reducing the economical barriers