EUPeace
European University for Peace, Justice, and Inclusive Societies

Education for Open Science Strategy

Deliverable 8.2

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About EUPeace

EUPeace is the European University for Peace, Justice, and Inclusive Societies.
Our mission is to provide tomorrow's citizens with the skills, knowledge, and experience to cultivate Peace, Justice, and Inclusive Societies. We explicitly address all sciences and fields, from the humanities and social sciences to the natural and life sciences as well as engineering, and are inspired by the rebuilt bridge of Mostar – the symbol in our logo – as a testament to how dialogue can overcome conflict.

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Çukurova Üniversitesi		Çukurova University
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Executive Summary

Open Science is a cornerstone for a democratic, inclusive, and transparent academic culture. The EUPeace Alliance recognises that achieving Peace, Justice, and Inclusive Societies requires not only excellent research but also open, participatory, and equitable education. The *Education for Open Science Strategy* was therefore developed to embed the principles of openness, transparency, and collaboration into teaching and learning across the Alliance.

It should be noted that this report focuses exclusively on an Education for Open Science Strategy, without taking precedence over an EUPeace Open Science Strategy as such. In this respect, this document represents an important but preliminary step towards more comprehensive discussions that will be held at Alliance level on an Open Science Strategy. These will necessarily involve a process of broad consultation with all stakeholders at Alliance level and among its members.

The present strategy places education, skills development, and capacity building at the heart of the Alliance's Open Science efforts. Developed under work package 8 (Impact and Dissemination) of our EU-funded project, it directly supports the cross-cutting objectives of EUPeace by promoting internal and external visibility, fostering a culture of openness, and aligning educational practices with the FAIR principles (Findable, Accessible, Interoperable, Reusable).

The development of the strategy followed a structured, multi-step process. An expert working group, including representatives from the Alliance libraries, conducted a mapping of existing Open Science initiatives to establish a shared understanding of current practices, gaps, and opportunities. The group then formed thematic writing teams to define the core elements of the strategy, including principles, educational formats, and implementation guidelines. Drafts were iteratively reviewed by the Steering Committee and the Education Board of EUPeace, ensuring strategic alignment and practical relevance.

The *Education for Open Science Strategy* is designed as a living document, providing a foundation for ongoing development, practical implementation, and cross-Alliance coordination. It will evolve alongside institutional developments and technological change, while exploring synergies across WP2 (Transforming Curricula), WP6 (Research Hubs and Doctoral Studies), and WP7 (Societal Dialogue) of our project. Key planned actions may include the creation of joint guidelines, repositories of best practices, workshops, and training activities.

Ultimately, the *Education for Open Science Strategy* aims to empower educators, students, and researchers as multipliers of openness, ensuring that the values of transparency, equity, and accessibility become integral to academic life. It provides a roadmap for embedding Open Science as an educational and cultural practice, thus contributing to the Alliance's broader mission: building peaceful, just, and inclusive societies through education and knowledge sharing.

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Contents

Glossary & Abbreviations

FAIR	Findable, Accessible, Interoperable, Reusable
OER	Open Educational Resources
WP2	Work package 2 “Transforming Curricula” of the present EU-funded project
WP6	Work package 6 “Research Hubs and Doctoral Studies” of the present EU-funded project
WP7	Work package 7 “Societal Dialogue” of the present EU-funded project
WP8	Work package 8 “Impact and Dissemination” of the present EU-funded project
UMR	PHILIPPS UNIVERSITAET MARBURG, or Marburg University
JLU	JUSTUS-LIEBIG-UNIVERSITAET GIESSEN, or Justus Liebig University Giessen
UNILIM	UNIVERSITE DE LIMOGES, or University of Limoges

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UNICAL	UNIVERSITA DELLA CALABRIA, or University of Calabria
COMILLAS	UNIVERSIDAD PONTIFICIA COMILLAS, or Comillas Pontifical University
UWB	ZAPADOCESKA UNIVERZITA V PLZNI, or University of West Bohemia in Pilsen
SUM	University of Mostar
CU	UNIVERSITY OF CUKUROVA, or Çukurova University
UNSA	UNIVERZITET U SARAJEVU, or University of Sarajevo

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1. Introduction

1.1. About EUPeace

Our Vision & Mission

Tragically, the values of peace, justice, and inclusive societies cannot simply be taken for granted. They must be continuously cultivated, studied, and shaped to define the road to an ambitious and challenging socio-political goal. In this, universities have a key role to play. They are at the heart of societies, providing the insights and techniques necessary to address the environmental, technical, political, and social challenges the next generation has to face. Through research and education, they connect people of all generations; they can be model places for protecting and strengthening the values of mutual respect, justice, and inclusion. As such, they are powerful instruments for building peaceful communities.

EUPeace's mission is to provide tomorrow's citizens with the skills, knowledge, and experience to cultivate Peace, Justice, and Inclusive Societies.

We explicitly address all sciences and fields, from the humanities and social sciences to the natural and life sciences as well as engineering, and are inspired by the rebuilt bridge of Mostar – the symbol in our logo – as a testament to how dialogue can overcome conflict.

Our Profile

The commitment to Peace, Justice, and Inclusive Societies is at the core of the European ideal and needs to be continuously cultivated. We argue that peace cannot flourish unless a set of enabling conditions are firmly in place: it goes hand in hand with a deep commitment to justice and inclusion.

EUPeace is comprised of nine institutions that are similar in size, location and mission within their respective national ecosystems. We are a synergetic mix of universities, characterised by our territory-rial embeddedness, concern for impact and deep attention to the quality of student life within and beyond our campuses. We have come together, based on long-standing cooperation experiences as well as newly formed ties within the EUPeace universities. We are Marburg University (Germany), Justus Liebig University Giessen (Germany), University of Limoges (France), University of Calabria (Italy), Comillas Pontifical University (Spain), University of West Bohemia in Pilsen (Czechia), University of Mostar (Bosnia and Herzegovina), Çukurova University (Türkiye), University of Sarajevo (Bosnia and Herzegovina) as well as our associated partners in Europe and beyond.

We are embracing and fostering our unique geographic distribution and the implications these geographic roots bring to EUPeace: our institutions are located in regions with a lot of internal diversity and sometimes a still recent history of conflict.

Our Approach

EUPeace is about strengthening the enabling conditions for peace: understanding them better through research, nurturing them actively through education, and fostering them broadly through societal outreach and innovative practices.

We develop joint and innovative teaching and learning experiences in which students learn to understand ultimate as well as proximate causes of conflict situations – including aspects of techno-logical and environmental interdependencies – gain experience in how to manage conflicts effectively, and how to implement solutions to conflicts.

We bring our entire academic communities together to generate knowledge, competence and innovative approaches to fostering peace, justice, and inclusive societies. All fields and sciences are required to grasp the conditions of conflict prevention, forecasting and resolution, in a world where material, technical and socio-political arrangements are intimately connected.

We come together with our partners from our local communities and international networks to co-construct concrete practices and solutions to turn these competencies into impact beyond academia. To achieve this, the exploration of innovative leverage points for impact, such as our focus on teacher training, is key.

1.2. Context & Objectives

Open Science is at the heart of a democratic and inclusive knowledge society. In a rapidly changing academic environment, fostering the principles of openness, transparency, and accessibility is not only a matter of research practice but also of education. The Education for Open Science Strategy therefore shifts the Alliance's original focus within its work package 8 plan from an Open Science Policy towards a comprehensive educational approach, placing the training of students, doctoral candidates, and staff at the centre. By focusing on training and awareness, the Alliance seeks to encourage a culture in which Open Science becomes a lived practice across different institutional and disciplinary contexts.

Education plays a key role in transforming Open Science from a set of abstract principles into concrete skills and values. Students and early-career researchers may develop competences in data management, publishing ethics, FAIR principles (Findable, Accessible, Interoperable, Reusable), and digital collaboration tools in order to contribute effectively to the European Research and Education Area. Libraries and knowledge infrastructures of the Alliance can play a vital role in this transformation, acting as hubs of expertise and practice. At the same time, Open Science is not only about technical aspects but also about inclusiveness, equity, and knowledge-sharing beyond academia.

Within work package 8, which ensures the impact and visibility of the Alliance through communication, dissemination, and Open Science, this strategy serves as a cross-cutting foundation. It directly

supports WP8's objective to make Open Science a driving force for educational innovation, ensuring that results and practices are shared transparently and sustainably across local, regional, national, and international contexts.

The Education for Open Science activities bring together the diverse expertise of the Alliance members in providing Open Science training and awareness formats. By explicitly including all academic disciplines, these activities acquire a truly interdisciplinary character, shaping the joint discussions and initiatives. Topics covered include open access publishing, research data management, technological tools for long-term data preservation, and ethical considerations such as justice in the open science discourse.

By developing a shared Education for Open Science Strategy, the Alliance expresses a collective intention to contribute to a gradual and sustainable transformation of academic culture. In this way, it seeks to empower future generations of students and researchers to actively contribute to a transparent, fair, and globally connected knowledge society.

1.3. Approach & Methodology

The process of developing the Education for Open Science Strategy was structured in several phases and relied on broad collaboration across the Alliance. From the outset, the focus shifted from the idea of an Open Science Policy towards a more inclusive educational approach, highlighting learning, capacity building, and cultural aspects rather than regulatory or procedural frameworks. This shift laid the foundation for developing a shared understanding and a collective vision among partner universities.

A dedicated working group, composed of Open Science experts and representatives from the university libraries of the Alliance members, coordinated the process. Given their experience in data management, publishing infrastructures, and training activities, the libraries served as central contributors to the reflection process. The group began by mapping existing Open Science initiatives across the Alliance to capture the current landscape. This mapping provided a shared knowledge base and helped to identify areas of strength and potential opportunities for further development.

Building on these insights, the working group formed thematic writing groups to explore the key dimensions of the strategy: the principles it should include, the educational formats required, and the means of implementation across disciplines and institutions. Drafts prepared by these subgroups were consolidated into a preliminary framework, intended as a basis for further discussion, rather than a prescriptive plan.

Subsequently, the draft was shared with the Steering Committee and the Education Board of EUPeace for feedback. Due to the strategic significance of the document for the Alliance this step was followed by additional institutional feedback beyond the working group level. To allow for these broader consultation processes, the timeline for finalisation was extended by a few weeks, ensuring

that relevant stakeholders had sufficient opportunity to review and contribute their perspectives. The resulting exchanges were instrumental in aligning the strategy with the overarching objectives and values of EUPeace, while also ensuring that institutional diversity and autonomy were respected.

The consolidated draft was finalised as a *living document*, designed to inspire and guide future discussions and developments, while remaining flexible and responsive to changing institutional, technological, and societal contexts. It serves as a reference point for integrating Open Science across education and research.

The methodological approach thus combined **expert input, institutional mapping, iterative drafting, and multi-level feedback processes.** Through this collaborative and reflective approach, the Education for Open Science Strategy has emerged as a collective expression of intent, a framework that encourages dialogue, exchange and mutual learning across the Alliance.

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2. State of Open Science within the Alliance

2.1. Mapping of Existing Initiatives

The mapping of existing Open Science initiatives across the EUPeace Alliance has provided a detailed picture of the current landscape, revealing both substantial progress and areas with potential for further development. All partner universities are actively engaging in Open Science practices, though at different levels of maturity and institutionalisation. The survey covered five main dimensions: Open Access initiatives, Open Educational repositories, Open Educational Resources (OER), Open Science initiatives, and workshops or dissemination activities.

Across the Alliance, universities have established a variety of initiatives to promote openness.

Key examples include:

- **Open Access initiatives**: Several universities have institutional policies, funding instruments or dedicated journal platforms in place, e.g. the *Open Journal Systems* used by JLU, UMR, and UNILIM, as well as the *OA publication fund* at UWB and University Publishing House PRESSUM at SUM.
- **Repositories**: Most partners maintain institutional repositories for research output and data, such as *LiSA* and *IRIS* at UNICAL, *AVESiS* at Çukurova University, *JLUpub* at JLU, *SUMPAUK* at SUM, and *HAL* at UNILIM.
- **Open Science Initiatives**: Dedicated institutional programmes, including *OSIUM* at UMR and *OS team structures* at UNILIM, illustrate the growing integration of Open Science into institutional frameworks. Other partners, such as COMILLAS and SUM, are currently developing Open Science policies or statutes.
- **OER**: Open lectures, training materials, and OER platforms are emerging across the Alliance, for instance at UNSA and UMR, while other institutions are in the process of developing policies to support the creation and reuse of OER.
- **Training and Awareness**: Regular events such as *Open Access Weeks*, workshops on *FAIR data management* (e.g. UWB, UNSA, JLU, SUM), and dedicated *Train-the-Trainer retreats* (UMR) demonstrate the growing focus on skills development and community building.

University libraries play a central role in most of these activities, acting as hubs for expertise, infrastructure, and support. They facilitate training sessions, manage repositories, and often coordinate institutional Open Science strategies. However, the mapping also revealed that these activities are often project-based and not yet embedded systematically into study programmes or doctoral education.

2.2. Key Findings & Challenges

The mapping revealed that all partners are committed to openness, demonstrating strong engagement with Open Science, even as their approaches and infrastructures are still evolving. Several cross-cutting insights emerged:

- **Growing educational initiatives**: Workshops and training programmes are increasingly offered, laying the groundwork for more systematic integration into educational formats.
- **Diverse infrastructures**: Repositories, metadata practices, and data preservation policies vary across institutions, reflecting a rich landscape of solutions from which partners can learn and build upon each other's experiences, fostering mutual learning and gradual alignment, where beneficial.
- **Central role of libraries**: University libraries consistently act as key drivers for Open Science, serving as knowledge hubs and trainers for the academic community.
- **Emerging OER potential**: Open educational resources are available and increasingly recognised, offering valuable opportunities for shared learning, co-creation, and the exchange of practices in developing, curating, and reusing educational materials.

These encouraging developments highlight several opportunities for the Education for Open Science Strategy. While some partners have already established comprehensive frameworks and dedicated support units, others are beginning to formalise their approaches, presenting a fertile ground for mutual learning and collaboration. The diversity in infrastructure and practices across institutions provides a rich basis for exploring interoperable solutions. Moreover, the evolving perception of Open Science as an educational transformation could point to strong potential for further embedding Open Science across activities within the Alliance.

2.3. Strategic Implications

The findings suggest that future collaboration within the Alliance can benefit from connecting and complementing existing efforts rather than creating new structures. Strengthening libraries as Alliance-wide service hubs and exchanging institutional experiences may serve as useful directions for exploration.

Ultimately, this mapping exercise serves as both a stocktaking and a starting point for ongoing dialogue and further development. It highlights the progress already achieved within the EUPeace Alliance while identifying possible avenues for continued reflection and collaboration. The Education for Open Science Strategy builds on these shared insights, offering a framework through which Open Science can be further explored as a collective educational endeavour, supported by all members of the Alliance.

3. Plan of Action

The Education for Open Science Strategy of EUPeace will continue to evolve throughout the first funding period and beyond. Conceived as a *living document*, it serves as the basis for shared reflection and mutual learning across the Alliance, while remaining open to refinement and adaptation in response to new developments, feedback, and institutional needs.

In this spirit, the consolidated draft developed by the expert group will continue to be discussed and enriched through ongoing consultation with relevant stakeholders. Future exchanges may explore potential synergies with other work packages, as well as opportunities to connect existing institutional activities and expertise.

Building on the mapping of Open Science initiatives across the Alliance, future steps could include identifying areas where shared guidance or exchange formats might be beneficial, for instance, through the compilation of good practices or the organisation of joint training opportunities. These exploratory activities would aim to strengthen awareness, collaboration, and knowledge-sharing within the Alliance, without prescribing uniform implementation pathways.

The working structures established during the drafting process, particularly the collaboration between the Open Science expert group and the Alliance libraries, serves as a foundation for continued cooperation. An in-person meeting with the EUPeace Libraries Group is considered as an opportunity for exchange, collective planning, and the identification of synergies across existing services and infrastructures.

In parallel, the Open Science group intends to remain in dialogue with other work packages to explore intersections and complementary initiatives:

- with **work package 2** (Transforming Curricula) to explore the possibilities of embedding Open Science principles in teaching and learning;
- with **work package 6** (Research Hubs and Doctoral Studies) to promote the engagement of doctoral candidates and young professionals in Open Science through training, mentoring, and shared infrastructures;
- with **work package 7** (Societal Dialogue) to foster interdisciplinary, cross-sectoral collaboration and to provide hands-on experience with Open Science practices.

Through these continued exchanges, the *Education for Open Science Strategy* may remain a reference framework that evolves collectively, encouraging reflection, voluntary engagement, and gradual transformation towards openness across all partner institutions.

Annex: Education for Open Science Strategy

Contents

Glossary & Abbreviations

AI	Artificial Intelligence
APC	Article Processing Charge
AVESiS	Akademik Veri Yönetim Sistemi (Academic Data Management System)
EHEA	European Higher Education Area
EUPeace	European University for Peace, Justice, and Inclusive Societies
FAIR	Findable, Accessible, Interoperable, Reusable
INOSC	International Network of Open Science Communities
NGO	Non-Governmental Organisation
OA	Open Access
OER	Open Educational Resources

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OJS	Open Journal Systems
OS	Open Science
OSIUM	Open Science Initiative University Marburg
PI	Principal Investigator
SDG	Sustainable Development Goal
STEM	Science, Technology, Engineering, Mathematics
TTT	Train-the-trainer
UNESCO	United Nations Educational, Scientific and Cultural Organization
LiSA	The Institutional Archive of Doctoral Theses and Digital Collections of Unical
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We come together with our partners from our local communities and international networks to co-construct concrete practices and solutions to turn these competencies into impact beyond academia. To achieve this, the exploration of innovative leverage points for impact, such as our focus on teacher training, is key.

1.2. Relevance of the Strategy

The Strategic Role of Open Science in Higher Education

The digital transformation has become a defining factor across all academic disciplines, fundamentally reshaping the way research is conducted, shared, and applied. The UNESCO Recommendation on Open Science highlights the crucial role of science, technology, and innovation in addressing global challenges such as climate change, social inequality, and the pursuit of the Sustainable Development Goals (SDGs). Open Science practices, enabled by digital technologies, enhance research efficiency, transparency, and reproducibility, thereby making scientific knowledge more accessible and impactful.

To achieve the widespread adoption of Open Science, it is imperative to build the necessary skills among students, lecturers and researchers. The *Education for Open Science Strategy* represents an initial step towards a more coherent approach to Open Science education, intended as a basis for continued discussions and collaborative refinement within the Alliance. Universities play a pivotal role in this transformation by fostering competences in open-access publishing, data sharing, reproducible research, and transparent peer review through dedicated learning formats and training opportunities. In doing so, universities help foster a culture of collaboration and accountability while equipping the next generation of scholars with the skills necessary for responsible and impactful research. Education for Open Science empowers students to critically engage with knowledge

production, contribute to the global scientific discourse, and respond to societal challenges with openness and integrity, thus reinforcing universities' roles as engines of both scientific progress and public trust.

EUPeace aims to empower future generations to actively foster peace, justice, and inclusive societies – goals that require open, transparent, and participatory approaches to knowledge creation and dissemination. Focussing on education for Open Science practices therefore aligns closely with the mission and vision of the Alliance. Open Science promotes the Alliance's values by making the processes more accessible, collaborative, and socially responsible. Integrating education for Open Science into higher education equips students, lecturers and researchers across all disciplines with the tools to engage in research that is not only academically rigorous but also socially impactful. This educational approach supports EUPeace's vision of universities as drivers of positive societal change, where knowledge is used to understand the roots of conflict, encourage dialogue, and build inclusive, peaceful communities. In this way, Open Science serves as both a method and a mindset that reinforces the Alliance's commitment to shaping a more just and resilient Europe through education and research.

State-of-the-Art: Open Science across the Alliance

Across the Alliance, the partner universities demonstrate an increasing, though varied, engagement with Open Science. Existing initiatives reflect a mosaic of efforts: Some institutions have implemented targeted activities, while others are in the planning or early implementation stages. These measures span areas including Open Access, Open Research Repositories, Open Educational Resources (OER), institutional policies, and training formats.

- **Open Access Initiatives**: Several universities have institutional policies, funding instruments or dedicated journal platforms in place, e.g. the *Open Journal Systems* used by JLU, UMR, and UNILIM, as well as the *OA publication fund* at UWB and *University Publishing House PRESSUM* at SUM. However, the available structures and funding across the Alliance vary significantly, and not all institutions offer comprehensive, systematic support for open publishing.
- **Research Repositories**: While most partners have institutional repositories in place, such as *LiSA* and *IRIS* at UNICAL, *AVESiS* at Çukurova University, *JLUpub* at JLU, *SUMPAUK* at SUM and *HAL* at UNILIM, or offer recommendations on suitable international repositories (such as Zenodo), the degree of integration into research workflows and the level of awareness among researchers are varied.
- **Open Educational Resources (OER)**: Efforts to promote OER are ongoing but remain fragmented. Some institutions (e.g. UNSA, UMR) showcase public lectures or faculty-led content, while others are at the policy development stage. Few have fully institutionalised OER creation and reuse.
- **Open Science Infrastructure and Policies**: Only a small number of universities provide a dedicated Open Science portal or engage in structured initiatives (e.g. OSIUM by UMR; UNILIM;

Open Science Policy by UNSA). Others are planning or lack overarching policies. This situation highlights a need for stronger coordination and knowledge exchange.

- **Training and Awareness**: While some partners offer online courses, YouTube content or regular events such as *Open Access Weeks*, workshops on *FAIR data management* (e.g. UWB, UNSA, JLU), and dedicated *Train-the-Trainer retreats* (UMR) that demonstrate the growing focus on skills development and community building, these are often ad hoc, institution-specific, and lack a broader pedagogical strategy.

These observations reveal a clear gap between individual good practices and the coherent, systemic integration of Open Science into university education. The fragmented status quo, characterised by local efforts, variable institutional commitment, and a lack of harmonised training, significantly limits the potential for collective impact.

To provide a comprehensive overview of these initiatives and identify potential areas for collaboration, **Annex 1** presents a consolidated mapping of all Open Science-related activities across the EUPeace partner universities. This mapping serves as both a reference point and a basis for further development within the Alliance.

A Joint Education for Open Science Strategy

The *Education for Open Science Strategy* is conceived as a **declaration of intent**, outlining shared goals and directions, providing a common framework that encourages dialogue, exchange, and mutual learning among the Alliance members.

Building on the diverse Open Science practices already established across partner universities, the strategy seeks to identify and connect existing strengths, fostering a shared understanding of how openness, transparency, and accessibility can be promoted through education formats. It aims to serve as a flexible reference point for future collaboration, allowing each institution to contribute its experiences and approaches to a collective process of learning and refinement.

The *Education for Open Science Strategy* also serves as a basis for further discussions with other teams within the Alliance working, in the context of our present EU-funded project, on 'Transforming Curricula' (WP2), 'Research Hubs and Doctoral Studies' (WP6), and 'Societal Dialogue' (WP7), to explore potential synergies and cross-cutting initiatives. These interconnections can support the Alliance in developing a coherent, inclusive, and sustainable approach to education on Open Science across disciplines and institutional contexts.

In this way, the document represents a starting point for joint reflection on how Open Science can be advanced within the Alliance and beyond, based on existing good practices and the shared commitment to an open and inclusive European knowledge space.

2. Challenges & Opportunities

Institutional & Cultural Barriers

Although Open Science education can transform how we share and build knowledge, turning that potential into lasting impact – especially beyond the walls of universities – comes with real challenges. Reaching that broader impact requires thoughtful planning and long-term engagement. Along this path, several challenges remain in ensuring its long-term impact and sustainable implementation. Universities are uniquely positioned to lead the way by weaving Open Science into teaching and research, but they face significant hurdles, such as tight budgets, shifting priorities, and natural resistance to change.

There are also challenges within academia itself. For many researchers, success is still measured by individual achievement or ownership of ideas (often defined through metrics such as the impact factor, which are, however, of limited relevance for assessing research quality), rather than by collective benefit or collaboration. Because of this, even those who deeply value practices of Open Science often find it hard to fully embrace them.

The situation is further complicated by the fact that there are no universally shared rules or standards across countries, disciplines, and methodological approaches. Practices of data sharing and publishing vary considerably, and these differences need to be recognised and respected. At the same time, the diversity of standards should also be reflected in educational policies on Open Science, ensuring that the plurality of scientific practices is acknowledged rather than erased. EUPeace contributes to overcoming these barriers by fostering exchange and collaboration across disciplines and backgrounds.

Engaging Society

One of the most significant challenges for EUPeace, and for Open Science as a whole, is ensuring its benefits reach as many people as possible. While partner universities have taken steps toward open access, open data, and even involving the public in research, these ideas have yet to gain traction among undergraduates, schools, public organisations, or many industries. There are several reasons for this. Beyond universities, many organisations lack the tools, technology, or trained staff to participate meaningfully in Open Science. There is also a substantial gap in awareness: many teachers, policy-makers, and the public remain uncertain about what Open Science means or how it could benefit them. Old habits also play a role, many fields and regions still rely on traditional, closed-off research methods, and change tends to be slow. There are serious concerns associated with sensitive data, privacy protection, or trade secrets, which have to be properly addressed.

Overcoming these hurdles is not merely a matter of upgrading technology: it requires people, communities, and universities coming together. It takes teamwork across different sectors, ongoing investment, and public engagement. EUPeace is designed to support this by encouraging shared

values, open conversations, and big-picture changes that can bring Europe's diverse schools and research communities together.

One of the most significant gaps, though, is in education. Today's researchers need new skills, like understanding data, managing it responsibly, and teaming up across different areas of expertise. But these skills are not yet systematically developed within higher education. EUPeace could be stepping in to help students and teachers acquire these essential competencies to participate in a more open and inclusive scientific community.

Artificial Intelligence & Open Science

The growing use of Artificial Intelligence (AI) tools across higher education and research introduces new challenges and opportunities for Open Science. AI systems depend fundamentally on access to large, high-quality datasets, making transparent data sharing and proper data stewardship essential. In this sense, Open Science provides the foundation upon which responsible AI can be developed and applied.

However, many current AI models remain 'closed' in nature: their underlying data, training processes, and parameters are not accessible, which limits transparency, reproducibility, and accountability. This contradicts the core principles of Open Science. 'OpenAI', for instance, often obscures the reality that such systems are rarely open in practice, and that transparency is not equally valued across all institutional or cultural contexts. To align AI practices with Open Science values, universities could therefore promote transparency in the use and documentation of AI tools, foster critical reflection on their limitations, and encourage researchers and students to consider how algorithmic systems influence knowledge production.

Long-term Investment & Inclusion

Building an authentic culture of Open Science demands long-term thinking and making fundamental changes to how we fund, support, evaluate, teach, research and stimulate the public engagement in it. And while encouraging openness is essential, we also need to remember aspects like privacy, ethics, and intellectual property. These are not obstacles but the foundation of responsible Open Science. Initiatives like EUPeace can create space for these values to coexist, aligning policies on a big scale while leaving room to adapt to local realities.

Long-term funding is crucial if Open Science is to take root and thrive. It is impossible to build strong infrastructure, train teachers, or sustain cooperation with short-term initiatives alone. Consistent investment is essential to ensure that tools, partnerships, and people behind Open Science continue to develop over time. It is just as essential to ensure everyone has an equal opportunity to engage. Open Science should not only benefit those who already have plenty of resources. EUPeace contributes to bridging these gaps by connecting different countries, institutions, and communities, allowing everyone to participate and benefit from open knowledge.

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Making Open Science education a part of everyday life across society is not easy, but there is ample reason to be optimistic. With steady commitment, inclusive teamwork, and coordinated action, our goal is to help shape a future where Open Science is not the exception, but the standard. In this future, knowledge is genuinely shared, it is democratic, it serves to promote rather than to undermine peace – and it is accessible to all.

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3. Vision & Goals

Our long-term vision is to promote Open Science as a shared, evolving, and widely recognised element of academic culture across the Alliance. Instead of prescribing fixed structures or uniform implementation, it represents a declaration of intent expressing a collective commitment to fostering openness, transparency, and collaboration in education.

We envision a university environment in which the principles of quality and integrity, collective benefit, equity and fairness, and diversity and inclusiveness are actively practised and upheld. In this sense, Open Science is an approach towards a mindset that shapes how knowledge is created, shared, and valued.

Open Science as an Integral Part of Higher Education

The integration of Open Science into higher education represents both a challenge and an opportunity. Practices such as data management, data sharing, open access publishing, research design preregistration, and transparent peer review enhance the quality, integrity, and societal impact of research. For institutions and the entire European Higher Education Area (EHEA), investing in Open Science education increases international visibility, supports cross-border collaboration, and fosters responsible research practices.

At the same time, this process requires reflection and dialogue across disciplines and institutions. Embedding Open Science into academic teaching and learning should not be seen as a rigid requirement but as a shared goal that evolves through collaboration. Especially in times of rapid technological change and global uncertainty, fostering these values within higher education strengthens trust in science and reinforces its role as a foundation of democracy and open innovation.

Key Target Groups

While the entire academic community can benefit from Open Science training, this strategy specifically targets educators – including lecturers, doctoral candidates, postdoctoral researchers, principal investigators (PIs) and support staff involved in training – as key multipliers. Educators are uniquely positioned to embed Open Science practices into their teaching and research supervision, thereby reaching a wide and diverse group of students across disciplines and equipping future generations with the skills to work transparently and collaboratively.

Train-the-Trainer Approach & Peer Learning

To achieve this, EUPeace intends to explore peer-based learning approaches that promote sustainable, community-driven knowledge exchange. Train-the-Trainer (TTT) retreats (e.g. https://digital-research.academy/train-the-trainer/) have proven successful in creating sustainable, community-based

knowledge exchange structures, reflection and collaboration, fostering both subject mastery and pedagogical competence. Such retreats could serve as a model for future capacity-building activities within the Alliance, providing educators with the tools to translate Open Science principles into practice. Participants in TTT programmes may in turn become ambassadors for Open Science within their departments, creating a cascading effect that supports cultural change from within.

These initiatives would not replace existing structures but rather connect to them, for instance, by linking education on Open Science to other activities of the Alliance, especially in the context of its EU-funded projects (e.g. in WP2, WP6 and WP7). In this way, the strategy offers a foundation for ongoing discussions and collaborative development, allowing Open Science to grow organically within the Alliance's broader educational ecosystem.

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4. Measures & Implementation

4.1. Open Science as a Shared Educational Principle

EUPeace recognises that Open Science education is a continuous learning process that benefits from the exchange of ideas, practices, and experiences across disciplines and institutions. Rather than prescribing fixed measures, this section outlines shared directions and opportunities for collaboration that can support the gradual integration of Open Science principles into teaching and learning activities within the Alliance.

The measures described below represent shared intentions and guiding approaches. They are designed to encourage each partner university to contribute in ways that align with its institutional priorities, existing expertise, and available structures. By pooling experiences, exchanging good practices, and learning from one another, the Alliance aims to create a coherent and mutually reinforcing approach to education on Open Science.

EUPeace understands Open Science as a guiding principle for education, aiming to promote openness, transparency, and collaboration across all fields. Building on the existing expertise and initiatives within partner universities, EUPeace seeks to strengthen the visibility and exchange of these practices. The *Education for Open Science Strategy* thus provides a framework for mutually learning from each other's approaches, whether through training formats, library services, data management support, or interdisciplinary project work.

A key opportunity for advancing education on Open Science lies in connecting it with real-world contexts and societal challenges. To this end, the Alliance aims to promote formats that connect Open Science education with practice-oriented and collaborative learning experiences. These could include, for example, interdisciplinary workshops, "Open Science sprints", or collaborations within the Alliance's *Living Peace Lab,* which would invite students, researchers, and societal partners to co-create knowledge in open and participatory ways.

By considering involving museums, libraries, NGOs and local authorities, these activities can demonstrate the practical value of Open Science while expanding its reach beyond traditional academic boundaries. They can also provide valuable opportunities for students and researchers to apply open methods, share data responsibly, and experience how openness supports creativity and innovation in addressing real-world problems.

4.2. Multipliers & Capacity Building

Multipliers

To foster lasting Open Science adoption, EUPeace aims to invest in educators as key change multipliers to promote a sustainable model that goes beyond one-off training. Our strategy focuses on

equipping faculty with the resources, support, and engaged community they need to integrate Open Science effectively into their teaching and mentorship. The Alliance's approach centres on a continuous TTT-programme. This involves intensive retreats where faculty gain core Open Science pedagogies. The emphasis will be on adaptable frameworks, not rigid formulas, allowing participants to tailor approaches to their disciplines – from using electronic lab notebooks in life sciences to guiding philosophy students in open annotation of primary texts. These TTT-programmes enable their participants to develop tools and materials specifically tailored to their various academic disciplines. These initial trainers may evolve into mentors for subsequent cohorts, expanding a network of confident Open Science educators across the Alliance.

The gradual development of TTT activities within the Alliance will take place over the coming years, with a focus on co-creation and flexibility rather than rigid planning. During the first half of 2026, attention shall be directed towards identifying and connecting existing best practices in Open Science training across partner institutions. These experiences serve as a foundation for collaboratively developing adaptable concepts and materials that reflect the diverse disciplinary and institutional contexts of EUPeace members.

In the second half of 2026, the first pilot formats will be launched, either by building on successful activities already in place or by engaging with and testing well-established initiatives organised by external parties. These pilots may provide valuable insights into what kinds of learning formats, topics, and levels of engagement are most effective for different target groups. They may also help define the balance between online and in-person exchanges, ensuring accessibility while maintaining opportunities for direct collaboration.

Throughout 2027, the network of trainers is expected to grow organically as more educators and staff members participate, exchange experiences, and take on mentoring roles for new colleagues. The training activities may remain adaptable and may be continuously refined in response to emerging needs, feedback, and developments in the Open Science landscape. In this way, the Alliance aims to foster a dynamic and sustainable community of practice that supports the long-term integration of Open Science principles through shared expertise, collaboration, and peer learning.

Embedded Support & Community Building

While the trainer network may be expected to expand as educators exchange experiences and take on mentoring roles, such growth will only be sustainable with a clear structure and active coordination. Professional community management — supported by adequate time and financial resources — would be essential to guide this development, ensure alignment with shared goals, and maintain the quality of activities.

Concretely, such management shall encompass activities like on-boarding and supporting new trainers, facilitating regular exchange meetings, maintaining documentation and shared resources, coordinating collaborative projects, and promoting the network internally and externally. Drawing on

approaches used by initiatives such as the International Network of Open Science Communities (INOSC), these efforts would provide the scaffolding for a vibrant, self-sustaining trainer community.

Building on this foundation, the initiative's embedded sustainability mechanism will only be effectively implemented if it is supported with sufficient community management resources (comparable to those available to INOSC). With such support, Open Science pedagogy can be meaningfully integrated into existing faculty development programmes, enabling trained educators to take on the role of facilitators for informal "Open Science circles" or discussion groups within their institutions.

These spaces will allow colleagues to exchange experiences, share practical solutions, and co-develop teaching resources.

Exploring Synergies within the Alliance

To further strengthen these efforts, several opportunities for collaboration with other teams working in the context of our current EU-funded project have been identified. These are not fixed plans but proposals to be explored in greater depth in the coming months in dialogue with the relevant teams:

- **Transforming Curricula** (WP2): Possible synergies may include the exploration of flexible learning pathways focusing on Open Science skills, particularly in the context of *lifelong learning*. These shall enable students and staff to acquire recognised competencies in areas such as FAIR data management, open access publishing, or research transparency, in formats that complement existing teaching structures rather than altering them.
- **Research Hubs and Doctoral Studies** (WP6): A potential integration of an *Open Science Community of Practice* within the EUPeace Doctoral Network may help connect doctoral candidates and supervisors across disciplines, encouraging knowledge exchange and responsible research practices. Likewise, mentorship initiatives within the EUPeace Academic Mentoring Network may provide a valuable framework for pairing experienced Open Science practitioners with newcomers, ensuring continuity and peer-to-peer learning.
- **Societal Dialogue** (WP7): Joint formats shall be explored to connect Open Science education with the Living Peace Lab and the planned soft skills courses, offering opportunities for students, teachers and external learners to apply Open Science principles in real-world, cross-sectoral settings.

Building on these foundations, pilot activities shall be launched in 2026, focusing on collaborative, hands-on learning experience, such as modular workshops on data management or joint replication projects within doctoral training contexts. These pilots will serve as opportunities for testing different approaches and collecting feedback from students and faculty.

Throughout 2027, the insights from these pilots shall inform the further development of supporting infrastructure, ensuring that Open Science activities remain accessible, sustainable, and adaptable to institutional realities. By embedding these activities in existing structures rather than adding new

layers, EUPeace aims to foster an enduring culture of collaboration and open exchange that extends beyond the lifetime of the current project.

4.3. Exploring & Integrating Open Educational Resources (OER)

The EUPeace Alliance recognises OER as a fundamental pillar of equitable education, promoting co-creation and continuous improvement of learning materials. In alignment with Erasmus+ Programme Guide 2025 priorities – inclusion, digital transformation, and innovation – the Alliance seeks to further explore how OER can be supported and promoted within existing structures.

EUPeace will consider joining and contributing to existing OER initiatives at the European, cross-Alliances, or national level. This approach ensures that materials developed within EUPeace are visible and reusable beyond the Alliance, while avoiding duplication of efforts and leveraging established infrastructures.

Educational materials emerging from joint EUPeace activities shall, wherever possible, be released under open licences to allow for free access, adaptation, and reuse. These resources include, for example, training modules, guidelines, or case studies developed in the context of Open Science education. By encouraging a culture of sharing and collaboration, the Alliance contributes to the broader goal of making high-quality educational content accessible to all learners.

In the coming months, the focus shall be on identifying best practices and suitable repositories that align with the Alliance's objectives, such as EU-level OER platforms or national open education frameworks. Once a common approach has been agreed upon, a small working group will coordinate contributions and develop a shared understanding of licensing, metadata, and quality assurance.

Through this pragmatic, collaborative approach, EUPeace aims to strengthen its contribution to Open Science without creating redundant structures. This work shall also provide a foundation for further discussions with other Alliances and partners interested in advancing Open Science together.

5. Conclusion

The EUPeace *Education for Open Science Strategy* represents a shared vision and collective intention to foster a more open, transparent, and inclusive academic culture across the Alliance. It serves as a framework for dialogue, cooperation, and gradual transformation, an evolving document that will continue to grow through shared learning and collaboration among partner institutions.

By placing education at the centre of Open Science, the Alliance underscores its belief that lasting change begins with awareness, understanding, and empowerment. Through training, exchange, and community-building, universities will enable the next generation of researchers and educators to apply openness and responsibility as guiding principles in their work.

At the heart of this strategy lie three interlinked commitments:

- **To empower educators** as multipliers of Open Science culture through peer-based learning and sustainable capacity building;
- **To enable students** to gain meaningful, hands-on experience in transparent and collaborative research practices;
- **To strengthen institutional collaboration** by aligning educational activities with the values of openness, accessibility, and social responsibility.

The strategy recognises that achieving these goals requires time, reflection, and ongoing cooperation. Differences in institutional priorities, disciplinary practices, and available resources are not obstacles but opportunities for exchange and mutual learning. By openly discussing these challenges, EUPeace will identify common solutions and promote a culture in which collaboration replaces competition and shared knowledge becomes a foundation for progress.

Looking ahead, this strategy will continue to serve as a declaration of intent and a basis for further discussion, particularly in connection with related initiatives in our EU-funded project. Together, these efforts aim to make openness not an exception but a natural part of how we teach, learn, and create knowledge.

By advancing education on Open Science in this spirit, EUPeace will contribute to a more just, informed, and resilient society, one in which knowledge is recognised as a shared good and education as a genuine force for peace.

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Annexes

Annex 1: Overview of Open Science Related Activities within the Alliance

University	OA Initiatives	OS Initiatives	Open Research Repository	OER	Workshops/Trainings/ Dissemination Activities
UMR	- OA policy - OA fund - Open Journal System (OJS)	- OS website - OSIUM	- Research data policy - Research data management and FAIR open data - Open research data repository open_UMR	- OER policy - ILIAS - HessenHub (https://www.hessenhub.de/) - OSIUM OER	- OS programme offered by MARA - OS events - TTT retreats - OS newsletter - HeFDI data school - HeFDI code school
JLU	- OA publication fund - Open Journal System (OJS) - OA resolution	n/a	- JLUpub	- ILIAS - HessenHub	- YouTube Channel by university library - Training courses - OA Information days - HeFDI data school - HeFDI code school
UNILIM	- OS policy - OA fund - Digital publishing platform PULIM open access e-book	- French Open Archive HAL for research article - OS website / activities	- Institute space in French Research Data Gov repository	n/a	- OS team provides individual / group researchers training on OS, research data management, OA journals etc.

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UNICAL	- Possibility to publish in OA thanks to the transformative agreements managed by the Library System via CRUI, Conference of Italian University Rectors - Green OA via IRIS, the institutional repository - Strategies for promoting OA and FAIR data within the framework of the funding opportunities provided by Italy's National Recovery and Resilience Plan (PNRR)	- OS policy planned	- IRIS - LiSA - Policy for doctoral theses - PNRR Implementations (es. Open digital educational resources within the Digital Educational Hub; FAIR project AI research data within the SoBigData research infrastructure)	- PNRR Implementations (e.g. Open digital educational resources within the Digital Educational Hub)	- Providing guidance/tools for implementing OA & using repositories (IRIS, LiSA) - Help IRIS wiki - ARIIS (Research, Innovation and Social impact) team - ARIIS team provides Ph.D. students, researchers and support staff training on OA/OS - Initiatives related to Citizen Science
COMILLAS	- Agreements with publishers through CRUE (Conference of Rectors of Spanish Universities) to support Open Access publishing	- OS policy development ongoing	- Open institutional repositories	- Offers several MOOCs openly accessible via the platform https://moocs.comillas.edu/	n/a
UWB	- Green path - Golden path - OA publishing - Monitoring of Article Processing Charge (APC)	- OS policy waiting for approval	- Digital library - Pilot of an institutional data repository in a pilot phase	n/a	- Educational events/seminars - OA Week - OS training modules as a part of an integrated Ph.D. curriculum at selected faculties

SUM	- University Publishing House PRESSUM	- OS policy planned	- SUMPAUK	- SUMARUM E-learning System - SUM Academy	- International Symposium "Science, Scientific Communication and Journals" - Workshops and trainings
CU	- OA database - Access to Master's & doctoral theses through university library catalogue	- National Academic License for Electronic Sources (EKUAL)	- AVESİS - TÜBİTAK (The Scientific and Technological Research Council of Türkiye) - National Academic Network and Information Center (ULAKBİM)	- Academic journals	n/a
UNSA	- OA initiatives across several institutes	- OS policy adopted in May 2025	- R&D(igital) platform - Open research repositories by different institutes	- Public lectures - OER by several institutes	- OS in teaching by different institutes

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