Open Schooling Declaration

Welcome

The Open Schooling Declaration (OSD) is a comprehensive initiative aimed at advancing the open schooling movement. It seeks to raise awareness about the importance, objectives, methodologies, and relevance of open schooling across various forms of education. The OSD aims to strengthen open schooling by widely disseminating common principles, recommendations, and actions that promote the development of resources, technologies, methods, practices, and policies.

The OSD comprises 10 global principles, along with a set of 14 recommendations and 40 actions. It is intended for various stakeholders, including governments, international organisations, education agencies, ministries, charities, universities, schools, STEM professionals, and third sector organisations such as museums and outdoor education providers.

The initial version of the OSD was initiated by the partners of the CONNECT project and subsequently improved with input from an External Advisory Board. It underwent a pilot test by partners and collaborators who shared examples from their practices related to the OSD. The second version of the declaration was refined through discussions and contributions from experts and practitioners within the Open Schooling Together (OST) community. Currently this 3rd version is available for a large consultation.

This collaborative process will result in a joint deliverable that acknowledges all the collaborators involved in shaping the declaration.

You are very welcome to contribute with your views.

Sign in and Join us in the online version of this declaration.

Twelve principles list

1.
   Open Schooling is an approach to transform education by empowering students with science for wellbeing, better lives, and sustainability.

2. Open Schooling aims to enhance authentic education by bringing together schools, universities, enterprises, and civil society.

3. Open schooling's goal is to expand scientifically literate generations who care about real-world issues, know their needs, and take action.

4. Students as change agents learn responsible research and innovation to create a sustainable future with desirable careers.

5. Students solve real-life problems within and outside school through participatory methods involving scientists and communities.

6. Students develop competences in authentic contexts using scientific thinking and cross-disciplinary knowledge.

7. Flexible, engaging, and meaningful curricula with real-world applications help learners move from surface to deep learning.

8. Science, arts, and humanities curricula connect learners to co-create knowledge and practice skills relevant to them.

9. Open Schooling curricula foster learners' curiosity, ownership, and citizenship, enabling them to act responsibly with responsive actions.

10. Open schooling prioritises students' individual learning needs involving families, experts, resources, and technologies.

11. In the digital age, open schooling networks for learner-expert cooperation can enhance open democracy and social justice locally and globally.

12. Formal, non-formal, and informal learning ecologies help foster learners' sense of belonging, enjoyment, and confidence in science for life.

Twelve principles matrix

Dimension	Key: transformation of people, process, and policies	Requirements: forms of cooperation, community-school and, active participation	Outcomes: empowerment individual and collective with ownership, belonging, enjoyment, confidence
education	1.Open Schooling is an approach to transform education by empowering students with science for wellbeing, better lives and sustainability.	2.Open Schooling aims to enhance authentic education by bringing together schools, universities, enterprises, and civil society	3 Open schooling aims to expand scientifically literate generations who care about real-world issues, know their needs, and take action.
students	4 Students as change agents learn responsible research and innovation to create a sustainable future with desirable careers.	5 Students solve real-life problems within and outside school through participatory methods involving scientists and communities.	6 Students develop competences in authentic contexts using scientific thinking and cross-disciplinary knowledge.
Curricula/ knowledge	7 Flexible, engaging, and meaningful curricula with real-world applications help learners move from surface to deep learning.	8 Open Schooling connects learners' communities to science, arts, and humanities enabling the co-creation of knowledge relevant to them.	9 Open Schooling curricula foster learners' curiosity, ownership, and citizenship, enabling them to act responsibly with responsive actions.
communities	10. Open schooling prioritises students' individual learning needs involving experts, families, resources, and technologies/	11 In the digital age, open schooling networks that promote learner-expert cooperation, can enhance open democracy and social justice locally and globally.	12 Formal, non-formal, and informal learning ecologies help foster learners' sense of belonging, enjoyment, and confidence in science for life..

Fourteen Recommendations

1. **Create sustainable research and innovation networks with schools for specific challenges**: This involves establishing collaborative networks within and among schools with teachers, students, families, heads of schools, administration, and professionals for specific challenges. The aim is to foster sustainable practices, share knowledge, and develop new approaches to enhance open schooling initiatives and find better solutions for our persistent challenges.

2. **Link the national curricula to real-world problem solving to expand Open Schooling:** This emphasises the integration of national curricula with open schooling approaches and principles including practical and real-world problem-solving. It involves designing learning experiences that connect students with authentic challenges and encourage them to apply their knowledge and skills to address societal issues.

3. **Define shared visions collectively for solving local problems:** This highlights the importance of collaborative efforts in defining shared goals and visions for addressing local issues with collective design and implementation of strategies.

4. **Design personalised and accessible conceptual, methodological, and digital solutions involving all participants:** This emphasises the need to develop customised and inclusive information technology (IT) solutions and social tools (concepts, structures) that cater both to the diverse needs of participants in open schooling. It involves leveraging technology to create personalised learning experiences, ensure accessibility for all learners, and engage all stakeholders in the design and implementation of IT solutions.

5. **Promote transition to innovation governance:** This focuses on establishing effective governance frameworks and practices supported by technologies within open schooling contexts to integrate and analyse data from all schools and families. It involves ensuring responsible and ethical use of digital technologies, protecting privacy and data security, and promoting transparency and accountability.

6. **Seek national government support and funding from other stakeholders:** This highlights the importance of securing financial support and resources from various stakeholders, including science-based industries, local authorities, foundations, and other relevant organisations. The aim is to sustain and expand open schooling initiatives by securing funding for research, infrastructure, professional development, and program implementation.

7. **Provide autonomy through regulation for institutional change in schools to allocate working time for Open Schooling:** This emphasises the need for systemic and institutional change within schools to foster open schooling practices. It involves promoting innovative pedagogies, flexible learning environments, and supportive policies that enable schools to embrace open schooling principles and adapt their practices accordingly.

8. **Communicate the activities and challenges of Open Schooling to all stakeholders:** This stresses the importance of effective bidirectional communication to raise awareness and understanding of open schooling initiatives. It involves sharing information, guidelines, experiences, and challenges related to open schooling with various stakeholders. This involves know-how' tips on how to initiate and sustain the networks and communicate the open schooling activities, including the broader education community, policymakers, and the public **about challenges addressed through OS with specific actions with and for youth and policy makers.**

9. **Give recognition for all educators including teachers, students, scientists, and inspiring practices:** This highlights the importance of acknowledging and honouring the contributions and achievements of teachers, students, scientists, and other individuals involved in open schooling. It involves recognizing and celebrating inspiring practices, innovative approaches, and exemplary efforts that advance open schooling. Training is important to professionalise the open schooling network of people in and outside schools as agents of change.

10. **Empower teachers, students, families and communities with Open Schooling:** This emphasises the need to empower teachers, students, and families to actively engage in and benefit from open schooling practices. It involves providing professional development opportunities, promoting student agency and voice, and fostering strong partnerships between schools and families to support open schooling initiatives.

11. **Ensure that the process considers equity, diversity, and inclusive approaches for social justice.** This includes gender and socioeconomic differences / unprivileged and/or underserved communities. This underscores the importance of ensuring that open schooling processes and practices are accessible, inclusive, equitable, and responsive to diverse learner needs. It involves addressing systemic barriers, promoting equal access and opportunities, and adopting inclusive approaches that support social justice and educational equity.

12. **Ensure that the process follows a transdisciplinary approach considering different knowledge, practices and views:** This emphasises the importance of integrating knowledge and perspectives from multiple disciplines to address complex issues, build new knowledge and create ideas. In open schooling, a transdisciplinary approach involves bringing together diverse fields, such as education, science, arts, and mathematics, to provide learners with a holistic and integrated learning experience.

13. **Ensure that the process helps learners identify a pathway for personal and career awareness with** a **diversity of aspirations :** This means providing students with opportunities to explore different career options and gain insights into the professional world, through meaningful interaction with experts (e.g., working together in common projects, having informal discussions). In open schooling, this involves connecting learning experiences to real-world careers, exposing students to various industries and working environments, and helping them understand the skills and knowledge required for different career paths.

14. **Ensure that the process promotes quality and innovation in STEAM education:** Quality in terms of high standards including effective learning objectives, outcomes, experience, and pedagogical support. Innovation is about research-based interventions that are responsive, recognised and valued by large number of educational communities . This highlights the importance of fostering creativity, problem-solving, and innovation within the domains of science, technology, engineering, arts, and mathematics (STEAM). In open schooling, promoting innovation in STEAM education involves creating learning environments that encourage hands-on projects, use of emerging technologies, and collaboration to develop critical thinking skills for the future.

Fourty Actions

Recommendations	Examples of actions to implement the recommendations
1. **Create sustainable research and innovation networks around Open schooling**	1. **ADVOCATING**: Co-organize meetings with local, regional and national policy makers (e.g. science organisations, local authorities, Ministries of Education or Research) at various geographical levels (e.g. through Scientix's Science Thematic Seminars) to advocate for projects to address specific societal or local challenges through partnerships 2. **STAKEHOLDER ANALYSIS:** Perform stakeholder analysis in collaboration with schools and families for identifying key participants in each Open Schooling context, and ensure that their perspectives are considered. Stakeholders could include school leaders, teachers, students, parents, scientists, researchers, administrators, and representatives of local communities. 3. **ROLE OF RESEARCH**: Engage researchers whose R&I priorities are related to the challenge or to relevant educational topics and facilitate their interaction with students and families. 4. **COLLABORATE**: Organise meetings & workshops to promote collaborative evidence-based decision-making in Open Schooling contexts and create other opportunities for collaboration between schools. 5. **POLICY MAKING**: Engage policy makers and other stakeholders during the whole Open Schooling process at early stage (e.g. with a webinar to get feedback and recommendations) to design/promote evidence-based policies 6. **MUTUAL LEARNING**: Engage teachers and scientists in mutual learning processes within communities of practice
2. **Link Open Schooling to real-world problem solving**	7. **NEEDS ASSESSMENT**: Engage stakeholders in needs assessments to identify: • Specific needs and capacities of schools to implement Open Schooling • How much support is needed for schools to implement Open Schooling • Which local problems are more relevant to respective countries, areas, and schools, with a special focus on those that affect disadvantaged students, vulnerable and under-represented actors. • Specific needs of researchers and policy makers such as funding providers, government agencies, and school administrators. 8. **PRIORITY SETTING**: Define the priority problems to address, in collaboration with schools, families, administrators and researchers.
3. **Collectively define shared visions for**	9. **SHARED VISION**: Engage all stakeholders to define a shared vision for the resolution of the problem, considering new trends, new perspectives, and evidence-based criteria

Recommendations	Examples of actions to implement the recommendations
the solution of local problems	
4. **Design personalised and accessible IT solutions involving all participants**	10. **DIGITALIZATION:** Promote more intensive and inclusive use of ICT to open up schools to science & industry and to the wider community including also Special Educational Needs and Disabilities (SEND). Co-design and co-create solutions and digital outputs, based on evidence obtained from Open Schooling, that are accessible to all and based on participants' needs and motivation.
5. **Promote digital governance**	11. **DIGITAL COLLABORATION involving professionals, protocols AND COMMUNICATION TOOLS** to facilitate governance of Open Schooling and problem-solving activities. 12. **COLLECTION, INTEGRATION AND ANALYSIS OF DATA** on the situation of young people and their communities at local, regional and international levels. 13. **PROMOTING THE INVOLVEMENT** of young people and families in open governance processes. 14. **EMPOWERING YOUNG PEOPLE AND FAMILIES** to take control of data collection and analysis and use the results in governance processes.
6. **Seek funding from science-based industries, local authorities and other stakeholders**	15. **FUNDRAISING**: Support schools and stakeholders to increase their human and economic resources in relation to fundraising (involving governments). 16. **DIFFERENT SORTS OF FUNDING:** Identify (e.g. national funding for mobility, funding from programmes that facilitate access to education resources at local, national and international levels.
7. **Promote institutional change in schools**	17. **INSTITUTIONAL CHANGE**: schools need the necessary autonomy to Integrate Open Schooling into existing education institutions and systems. 18. **TIME FOR OPEN SCHOOLING**: Allocate protected time (weekly or monthly) for teachers to design, implement and participate in Open Schooling projects, in collaboration with other teachers and stakeholders.
8. **Communicate the activities and challenges of Open Schooling**	19. **ALLIANCES**: Identify other EU projects focused on citizen science and participatory science to establish alliances for knowledge exchange and impact (e.g. *Open Schooling Together*). 20. **IMPACTFUL INITIATIVES**: Publish articles about Open Schooling in high impact social media and in print. 21. **CO-ORGANIZATION OF EVENTS:** Co-design and Implement events such as workshops, webinars or festivals (e.g. with Scientix, European Parents Association, Children's Universities) taking advantage of World Days and other external events.

Recommendations	Examples of actions to implement the recommendations
	22. **EDUCATION REPOSITORIES**: Publish Open Schooling resources in education repositories and ask teachers and organisations to recommend them. 23. **POLICY REPORTS**: Write policy reports on CONNECT findings and benefits and circulate them in order to engage policy makers. 24. **LEAFLETS**: Prepare a very clear one page leaflet per target audience on what we are offering, what the benefits are for them and how they can use CONNECT resources. 25. **SCIENTIFIC PUBLICATIONS**: Publish articles about Open Schooling and its practices in scientific journals. 26. **COMMUNITY AS COMMUNICATORS**: Communities, including youth, can report problems tackled and benefits gained. 27. **STUDENTS AS SCIENCE COMMUNICATORS**: Increase local initiatives for students to present their scientific projects and ideas. 28. **DISSEMINATION OF THE SHARED VISION**: Spread the vision as widely as possible.
9. **Give recognition for teachers, students, scientists and inspiring practices**	29. **AWARDS**: Give awards & certificates (e.g. recognition at national level with the CONNECT Open Schooling open badges) for teachers and students 30. **PERSUADING ORGANISATIONS**: Recognise scientists and researchers participating in OS (e.g. in their communication campaigns with scientific organisations) 31. **INSPIRING PRACTICES**: Disseminate inspiring practices and Open Schooling resources through websites and other channels provided by CONNECT and its participating communities. 32. **BENEFITS**: Disseminate benefits of inspiring practices with a focus on multi stakeholder networks and collaborations

10.
 Empower teachers, students and families for Open Schooling
	33. **EMPOWERMENT**: Empower participants to think critically, to engage in real problem solving, to learn transdisciplinary and ICT skills and to co-create Open Schooling resources with:
	   a. Training (e.g. Open Science summer schools, training in schools by scientists, for students)
	   b. Providing resources & guidelines for training
	   c. Offering Mentoring Schemes for students and families
	   d. Engaging researchers, especially PhD candidates, interested in equity, diversity and inclusion

11. **Ensure that the process considers equity, diversity and inclusive**	34. **DIGITAL INEQUALITIES**: Provide equipment and Internet connection to schools and students at home, if these are lacking; ensure protection to other children's rights.

Recommendations	Examples of actions to implement the recommendations
approaches for social justice	35. **GENDER EQUALITY**: Support gender equality in local situations, bearing in mind that boys, girls and other groups may be disadvantaged in different ways. 36. **LEARNING INEQUALITIES**: Consider that learners do not all learn at the same speed or in the same way. 37. **SOCIAL INEQUALITIES**: Identify Socio-economic disadvantage hinders learning, career progression and social mobility.
12. Ensure that the process follows a transdisciplinary approach	38. **TRANSDISCIPLINARY SKILLS**: Ensure that Open Schooling resources facilitate the learning of transdisciplinary skills, e.g. combining sciences with arts and humanities subjects.
13. Ensure that the process promotes career awareness	39. **CAREER AWARENESS**: Ensure that Open Schooling promotes awareness of the world of work, the need for generic skills and the widest possible range of opportunities, within and beyond STEAM based careers.
14. Ensure that the process promotes innovation in STEAM education	40. **STEAM EDUCATION**: Promote innovation in STEAM education by identifying good practices that enable young people to increase their confidence, enjoyment, and wellbeing. Use phenomenon-based learning to build deeper understandings of the world and to increase young people's ownership of learning.

How the declaration was created

The methodological approaches used to design, refine, and validate this declaration are respectively:

- Mixed methods research including students, educators, professionals, and families; led by the OU to define the principles, policy strategies and recommendations.

- System-oriented dialogue model with consortium partners and User Advisory Board members led by IRSICAIXA to identify the list of recommendations and actions.

- Meeting stakeholder and expert consultation with external networks led by DBT to validate the declaration.

- OS Together meeting stakeholder and expert consultation with external networks led by the OU to refine the declaration considering all OS projects and references.

- OS Conferences 2023/2024 and other events for Large dissemination (e.g. CICOS2023, ECSITE2023 …).

This declaration will be submitted to the European Commission in 2023 part of the

research evaluation – policy report, final deliverable of CONNECT Project in DEC 2023

including all projects and members of EU funded projects who supported the validation.

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