SCHOOLS AS LIVING LABS

SALL

HIGH-LEVEL ROUNDTABLE: NEXT GENERATION EUROPE

Policy roadmap to European Policies for Living-Lab-Based Open Schooling

8 JULY 2022

το θαύμα είναι η αρχή της σοφίας

Wonder is the beginning of wisdom (Socrates)

SALL Roadmap – Main Concepts

- New emphasis must be placed on connecting innovation and science education strategies to societal needs and global developments: education systems are called to adopt **new approaches of learning**
- SALL adopts **open schooling** in science education where schools, become agents of community well-being by creating new partnerships with other local actors and addressing local issues relevant to them
- SALL proposes to transform schools into **living labs**. This open-innovation methodology puts people in charge of the innovation process. It involves different kinds of partners in a private-public-people partnership and integrates research and innovation processes in real-life communities and settings
- SALL **brings together** school communities, including teachers, students, and their families, research institutions, policy-makers, science engagement organisation and other non-formal learning and open innovation spaces

SALL Roadmap - Rationale

The aim of the **Policy roadmap to European Policies for Living-Lab-Based Open Schooling** is to put forward a set of policy recommendations that should be followed in order to normalise the use of the living labs methodology in education complemented with an open schooling framework through a consistent involvement of pupils and teachers.

The roadmapping exercise encompasses **three main steps**:
1) Identification of the policy gaps that hinder the uptake and implementation of living-lab-based open schooling
2) Elaboration of a set of future policy challenges and implementation scenarios related to living-lab based open schooling
3) Definition of a set of practical policy directions and recommendations for all stakeholders involved

SALL Roadmap – Research Questions

More specifically, the roadmap will tackle issues such as the following:

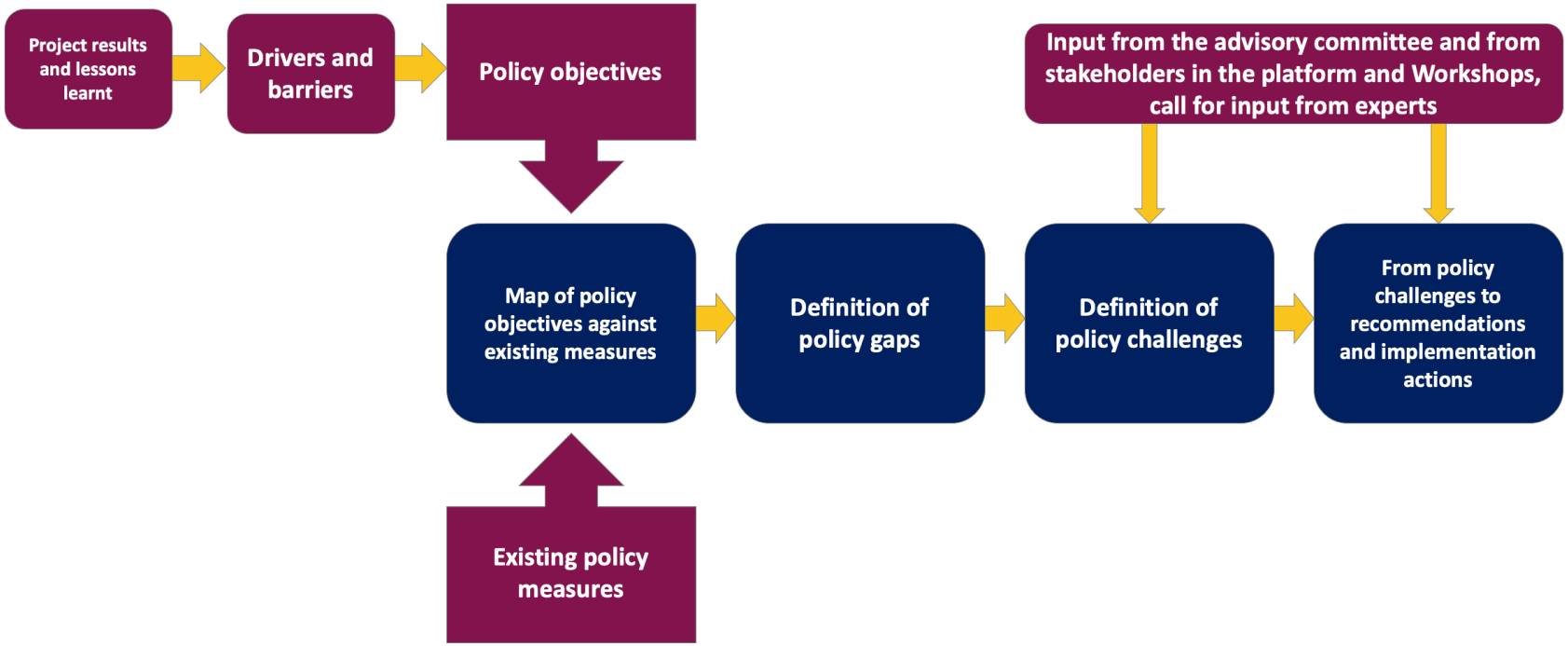
- Which major policy gaps and challenges should be considered and addressed for normalising the implementation of living-lab-based open schooling?

- What kind of instruments and incentives are necessary to tackle these challenges?

- What is the anticipated impact of these challenges to each policy domain and to the society?

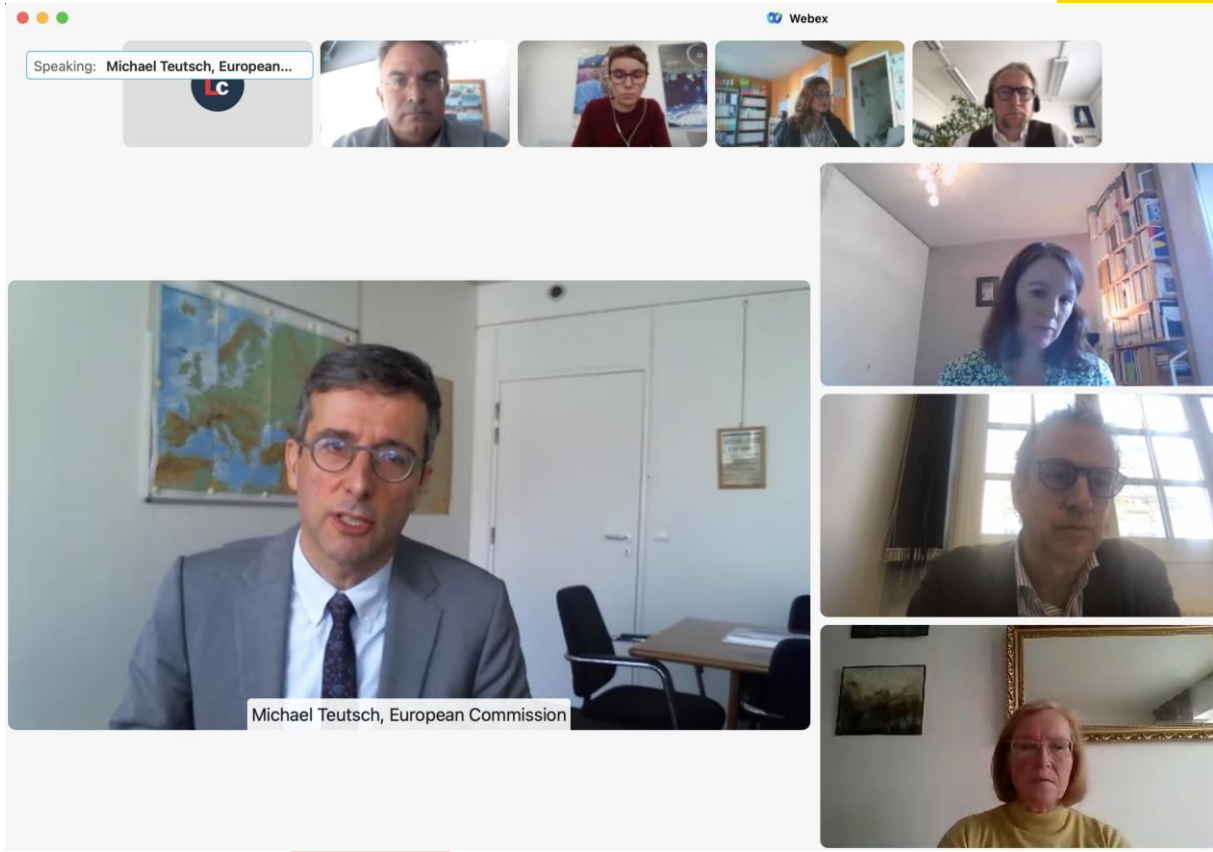
- Which are the broad recommendations for policy makers, researchers and schools that are meaningful to accelerate the take-up of living-lab-based open schooling?

SALL Roadmap - Methodology



SALL Roadmap – Roundtables feeding the roadmap/1

- **Cassie Hague**, analyst at the Centre for Educational Research and Innovation at the OECD
- **Tuija Hirvikoski**, director, Laurea University of Applied Sciences; former president and council member, European Network of Living Labs
- **Pavlos Koulouris**, senior researcher at Ellinogermaniki Agogi (Greece)
- **Matteo Merzagora**, scientific director, TRACES; director, Espace des Sciences Pierre-Gilles de Gennes, ESPCI-Paris Sciences et Lettres (PSL) University (France)
- **Francesco Mureddu**, senior director, the Lisbon Council
- **Michael Teutsch**, head of unit, schools and multilingualism, DG education, youth, sport and culture, European Commission



SALL Roadmap – Events feeding the roadmap/2

- Several approaches are tested and implemented at a small scale to rethink learning boundaries: how to scale them up?
  - Scale-up from successful individual classroom-level initiatives
  - Collaborate across the system with different actors and areas involved in the education system
  - Be patient, these kinds of changes don't happen over the night
- Key factors
  - *"Teachers are open to innovation. So, with the right support and structure, there is a lot of possibilities to transform science teaching in European countries"* (Hague)
  - *"Make the learning more effective in terms of competences acquirement but also to make it more attractive to students through more collaborative teaching methods"* (Teutsch)
  - *"The decision-makers should have the courage to trust the teachers and the teachers to trust their student creating a completely new open science and citizen scientists in Europe"* (Hirvikoski)

SALL Roadmap – Preliminary results: Policy Challenges

- Disparities in basic science literacy: students are likely to enter open schooling programmes with varying base levels of scientific competence: a 2010 study authored for the European Commission on educational inequality across EU regions observed significant disparities in the quality and effectiveness of science instruction offered throughout the EU.
- Lack of stakeholder commitment: consistent meaningful interaction between educational institutions and third-party stakeholders is crucial to avoid stakeholder disengagement.
- Gender gap: Despite their superior performance on tests of scientific aptitude, women and girls remain significantly underrepresented in science, technology, engineering and math (STEM)-related fields. PISA 2018 found that 14% of top-performing girls in science or mathematics expected to work in science or engineering compared with 26% of top-performing boys.
- Declining interest in science studies and related careers: While STEM professionals are in high demand and growth in these sectors is required to address topical concerns ranging from climate change to food and water security, interest in scientific tertiary studies and careers appears to be declining.
- Support system: The European Commission's 2020 Working Group on Schools Policy, which examined whole school approaches to challenges facing educational systems, concluded that facilitating strong cooperation between teaching staff, parents and families was crucial to prevent student disengagement.
- Monitoring: Another challenge in implementing open science learning initiatives is the lack of strategies to compare and analyse the outcomes of these programmes. While the EU has historically relied on standardised tests of academic ability like PISA to assess the quality of national education systems, these examinations tend to focus on reading, writing and mathematics at the expense of science.

SALL Roadmap – Preliminary results: Policy Challenges/2

- Lack of qualified teachers: in 2019 36% of all teachers in the EU were aged 50 or older, while only 7% were under 30. As technology transforms both education and the labour market, facilitating the entry of digitally adept young professionals into teaching has become increasingly crucial.
- Families and culture: parents and caregivers played a central role in encouraging children's interest in learning, creating learning opportunities outside of formal educational structures and facilitating appropriate cognitive development.
- Lack of cooperation: the 2015 Science Education for Responsible Citizenship report criticised inadequate investment in facilitating strategic collaboration between teachers, students, external education providers, researchers and industry professionals.
- Financial issues: open schooling initiatives must be implemented in a way that does not create extra financial burden for students and families.
- Digital divide/access to technology: as the digital transformation of society and the economy continues, it becomes increasingly important for educational policy to take into account the necessity of technological literacy.
- Rural areas: Rapid urbanisation across EU member states has also decreased the populations of rural areas and encouraged migration of young people to towns and cities; consequently, a disproportionately low share of the EU's under-50 population resides in remote areas, and schools in these regions tend to be small and underfunded.

SALL Roadmap – Preliminary results: Policy Challenges/3

- Regional disparities: in regards to general education achievement in the EU, there appears to be a North-South divide: low-performing students are concentrated in southern Europe, while students in Northern European countries display higher levels of competency
- Student engagement: it is important to prevent students from disengaging from science learning on the basis of perceived ineptitude, Presenting scientific learning as an ongoing process rather than one based solely on mastery of a specific set of concepts may help to sustain student interest in science into and through post-secondary studies.
- Evaluation issues: it has proved difficult to observe, measure and quantify the contributions of out-of-school programmes to the broader learning ecosystem.
- Physical and legal issues: although most EU countries have implemented legislation on the subject of ensuring access to education for children with disabilities, monitoring and enforcing these regulations has proved to be a challenge.

SALL Roadmap – Preliminary Results: Policy Recommendations/1

- Aligning open schooling with educational strategy: Stakeholder willingness to engage with open schooling initiatives will depend on the extent to which open schooling can be successfully integrated into central policies and curricula.
- Including educators in program design: These initiatives cannot succeed if the teachers administering them are unfamiliar with the tenets and aims of open schooling, nor can they succeed if their implementation is rushed or mandated without extensive consultation with educators.
- Community engagement: A key aspect of open schooling is the establishment of cooperative partnerships between schools and third parties in both the public and private sectors. This should be boosted.
- Accommodating needs of students: Open schooling programmes should be designed to be as inclusive as possible, and should take advantage of existing structural supports for students with disabilities. Schools need support to that regard.
- Incorporation of digital technology: Open schooling initiatives provide opportunities to improve the digital literacy of students through the strategic incorporation of technology - students may, for example, make use of graphics or data analysis software.

SALL Roadmap – Preliminary Results: Policy Recommendations/2

- Flexible curricula/school autonomy: Open schooling initiatives have the potential to motivate student engagement with science learning by incorporating issues of local relevance into curricula and by enabling partnerships between schools and community organisations.
- Prioritising skill development: While standardised testing may continue to have some utility in providing consistent measurements of scientific knowledge at the national and international levels, the results of these assessments should not be relied upon solely to evaluate the success of open schooling programmes: potential improvements to educational systems is important
- Networks and communities: The implementation of open schooling initiatives is more likely to be successful if opportunities are created for collaboration and communication between education professionals.
- Engaging parents and caretakers: Parents are unlikely to have pre-existing familiarity with the concept of open schooling, and they may feel concerned by a movement away from traditional educational strategies. Prior to and throughout the implementation of open schooling programmes, parents should be kept informed of the justifications behind these shifts.
- Incentives for school management: The uptake of open schooling will depend in large part on the willingness of school administrations to invest in the implementation of programmes; motivating enthusiastic engagement with open schooling proposals should be a priority.

SALL Roadmap – Future plan

- Release a new version of the roadmap in commentable format – July 2022
- Carry out at least another workshop for collecting feedback – Spring 2023
- Carry out two new disseminations of the roadmap online – Fall 2022 & Spring 2023
- Release the final version of the roadmap – August 2023

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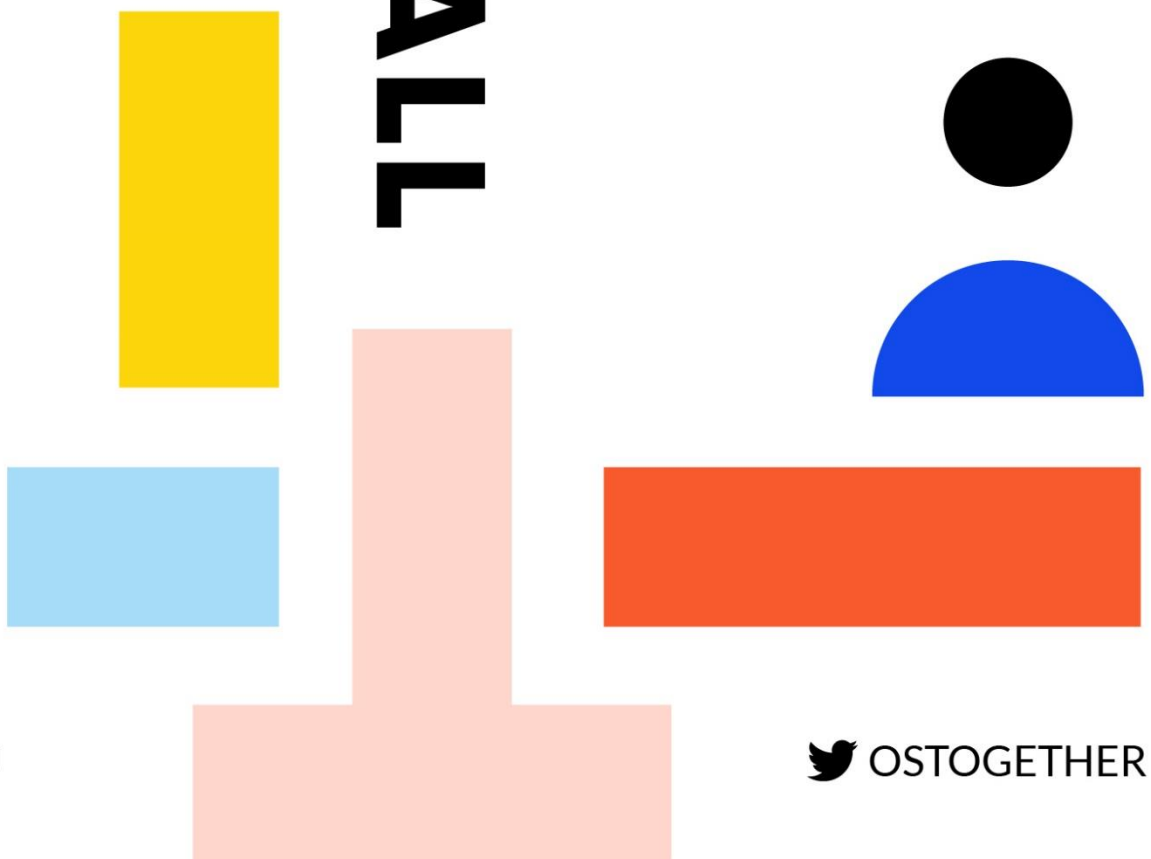

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