

# STEAM LEARNING ECOLOGIES

## Deliverable 5.2 - Report on the outcomes of Policy Dialogue and policy learning sessions



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**D5.2 Report on the outcomes of Policy Dialogue and policy learning sessions**

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0.2	17/11/2025	Received APRE's comments
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# 1 Introduction

This deliverable has three purposes:

1. To report on the methodology, objectives and results of the policy dialogue and the two policy learning sessions that were held during the three years of the SLEs project, showing how they contributed to SLEs' general policy recommendations and project outreach objective.
2. To discuss how the input gathered from stakeholders was used to improve the projects' policy briefs (informing D5.1), and shaping the priorities, hierarchies, obstacles identified in the draft recommendations (provided in D5.3).
3. To provide an overview of the reach and audience composition of the events and illustrate how the discussions supported the development of a shared understanding of the key challenges and solutions to making Open Schooling (OS) a vehicle for better and more relevant STE(A)M education.

## 2 Policy dialogue & policy learning sessions

### 2.1 Policy exchanges: rationale

Throughout its three-years implementation, the STE(A)M Learning Ecologies (SLEs) project organized and held a series of three policy learning exchanges, designed to connect project results and European and national education policy developments. The events provided a space for dialogue and reflection among policymakers, researchers and practitioners from the ground. They also helped validating, refining and disseminating the project's policy recommendations emerging from the progressive collection of insights gathered through the SLEs pilot implementations.

The content of each policy learning session was linked closely to the policy briefs developed throughout the project. Each exchange took place after a first draft brief had been prepared, which in turn coincided with key milestones of the SLEs project implementation cycle and concurrent analysis of results (e.g. finalizing the methodology and analysis of the current state of Open Schooling in 12 EU countries, closure of the pilot phase of 13 SLEs, closure of the scaling phase of +100 SLEs). Consequently, these events reflected the project's progressive learning journey, where evidence from implementation was analysed in the policy briefs and refined to inform discussion, validation and policy insights during the three events.

These briefs therefore informed discussions in two ways: first by providing context and new insights on the benefits and challenges of implementing OS projects for STE(A)M mainstreaming. Secondly, by giving rise to discussions on the policy implications of these findings, which were then fed back into the policy briefs for refinement.





## 2.2 Exchanges as a means to connect policy and experiences from the ground

The active involvement of European Commission representatives throughout the three exchanges provided a unique opportunity to create bridges between SLEs findings and ongoing EU and national education reforms and strategies. The dialogue with EU institutions offered a concrete channel to align project insights with strategic frameworks such as the STEM Education Strategic Plan and the Action Plan on Basic Skills. At the same time, exchanges with pilot initiators (i.e. those leading the implementation of an SLE), helped connect these European objectives with national and local contexts of implementation. This two-way interaction allowed the project to inform policy from a bottom-up (by generating insights through on the ground experimentation) and top-down approach (by using these insights to inform institutional strategies).

Each event contributed to this alignment in specific ways. The first Policy Dialogue, held in conjunction with the European Year of Skills (2023), showcased the potential of Open Schooling to promote 21st century competences by engaging students in shared science learning opportunities. The first Policy Learning Session, held during the project's second year, expanded on this reflection by linking SLEs results to specific dimensions of EU strategies, including curriculum reform, teachers' development and inclusivity. Finally, the second Policy Learning Session focussed on scaling and sustainability, connecting directly with the STEM Education Strategic Plan and exploring how SLEs methodologies could inform upcoming initiatives such as the STEM Education Centres and the STEM/STE(A)M Competence Framework.

Beyond institutional participation, these events ensured representation from the key stakeholder categories that have taken part in the SLEs pilots. Teachers and school leaders offered first-hand insights into how Open Schooling enriched teaching and learning for students; Researchers and universities played a key role in developing projects which are pedagogically relevant and utilize first class technology and methodologies; NGOs and informal education providers (museums, libraries etc.) highlighted their role in creating connections to local contexts and generating social inclusion benefits for all; industry representatives and science centres pointed to opportunities for connecting education with real-world challenges.

## 2.3 Methodology

Each policy exchange was designed as a dialogue with relevant educational stakeholders, allowing the project to present its policy outputs and receive feedback for their improvement. The first Policy Learning Session explicitly collected comments on the draft recommendations by ICSE Factory and Levers, both EU-funded projects, under the same call, with similar objectives and goals. However, this direct method led to a focus on the form and presentation of the recommendations (e.g. by introducing figures and more direct alignments to policy), rather than on their content and relevance. While these insights were incorporated in the following versions of the briefs, the most enriching approach was found to be validation through reflection, where discussions confirmed or reframed priorities and shed light on the relative importance of recommendations.

To implement that, participants to the policy dialogue received the policy brief two to three weeks prior to the event, alongside the questions that would start the exchange. The questions were framed to

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allow participants to reflect on themes relevant to the policy briefs and provide their insights based on their context and expertise. Participating stakeholders included representatives from all stakeholders' categories, including formal and informal education, NGOs, industry representatives, EC and national policymakers. The questions addressed can be found in the Annex alongside the events' agenda.

It is worth mentioning that the use of "roundtables" during these exchanges have been proved particularly effective. By a careful and targeted selection of participants, constructive and rich discussions have taken place, further promoting and enriching the consortium's findings.

Finally, each exchange concluded with a Q&A session, providing dedicated time for dialogue with participants and discussion of shared concerns. This interaction added an extra layer of validation, and the comments and insights collected were subsequently integrated into the corresponding policy briefs.

This method enabled the consortium to refine content iteratively, ensuring that each brief was not only disseminated, but also tested and endorsed by the relevant educational stakeholders before finalization.

At least two consortium partners attended each event to record interventions, collect qualitative input and synthesise outcomes. These detailed notes were reviewed collectively from the project's Work Package 5 leaders to produce public summary articles that were published shortly after each event on the project's website. This practice extended the reach of its policy learning process to a broader audience who could not attend the event. The articles are available on [steamecologies.eu](https://steamecologies.eu) news section.

## 2.4 Validation phase – feeding into D5.1 and D5.3

The policy events contributed directly to the other strands of WP5. As mentioned, each event represented an opportunity to validate and enrich the findings from the policy briefs. After each event, the briefs were reviewed to incorporate the perspectives emerged during discussions or reorganize priority areas. These briefs are all included in D5.1. The policy briefs and consequently the content of D5.1 and D5.2, then constituted the basis for the development of D5.3 recommendations.

The first Policy Brief<sup>1</sup> explored the policy landscape and identified the lack of systemic alignment between education, research, and innovation as a major obstacle to scaling up Open Schooling and STE(A)M education. The second Policy Brief<sup>2</sup> focused on teachers and schools, revealing that professional development, recognition, and institutional support are decisive factors for sustainability. The third Policy Brief (upcoming in December 2025) turned attention to evaluation and impact, showing how evidence and monitoring can drive policy continuity beyond individual projects.

## 3 Events Overview

This section identifies the main themes that emerged across the policy dialogue and learning sessions, capturing the most relevant stakeholder perspectives and ideas that were brought into D5.3 – SLEs Policy Recommendations. The agenda of each event, and the questions covered during dialogues and discussions are available in the Annex.



## 3.1 Event 1: SLEs Policy Dialogue Event: Bring research and innovation to school and beyond

### Scope

The first policy dialogue event was organized shortly after the publication of the 1st policy brief<sup>1</sup>, at the European Parliament, which investigated the state of Open Schooling in 12 countries<sup>2</sup>. The brief emphasized the need for greater coordination between EU policy and national initiatives to integrate open schooling into curricula, promote and sustain cross-sector partnerships, and strengthen teachers' professional development.

It also introduced the conceptual and policy foundations of the STE(A)M Learning Ecologies, as a methodology that can embed science education as a lifelong, inclusive and community-based process. In continuation with these insights, the event reiterated the EC commitment to support science education and initiatives for the promotion of lifelong learning such as open schooling. It called for a move from single projects to systematic change, which needs to be operated at national level through bottom up and top-down approaches.

The event was organized in alignment to the European Year of Skills, to place Science learning at the centre of the agenda for education innovation. The European Year of Skills was an EU initiative (2023–2024) designed to boost investment in skills development, address labour-market shortages, and promote upskilling and reskilling across Europe. Its aim was to better match people's talents with market needs, improve lifelong learning, and strengthen Europe's competitiveness and innovation capacity.

An article about the event is available on the website<sup>3</sup>.

### Participants

The event was organised by APRE, the Italian Agency for the Promotion of European Research, with the support of European Schoolnet. It brought together more than 50 participants, among which European Parliament (Beatrice Covassi, ITRE Committee) and Commission Representatives (Claire Morel and Maria Podlasek-Ziegler from DG EAC, Karen Slavin from DG TRD), policy makers, and stakeholders in education (teachers, project managers, heads of schools) and research and innovation (R&I) project representatives from School as Living Labs, RoadSTEAMer, Open Schooling Together Network.

### Challenges Raised

Several challenges to mainstreaming Open Schooling for STE(A)M education were discussed.

A first roadblock was the limited engagement of policymakers in implementing open schooling learning paths. Participants suggested that starting at local level, involving municipal and regional authorities,

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<sup>1</sup> STE(A)M Learning Ecologies First Policy Brief – Open Schooling for Science Education and a Learning Continuum for All. [https://www.steamecologies.eu/wp-content/uploads/2024/08/SLEs\\_1st-Policy-Brief\\_v.05\\_final-.pdf](https://www.steamecologies.eu/wp-content/uploads/2024/08/SLEs_1st-Policy-Brief_v.05_final-.pdf)

<sup>2</sup> Countries included : Cyprus, Germany, Greece, Ireland, Italy, Malta, Norway, Romania, Serbia, Slovakia, Spain, Sweden

<sup>3</sup> STE(A)M Learning Ecologies – Policy Dialogue article : <https://www.steamecologies.eu/sles-policy-dialogue-event-bring-research-and-innovation-to-school-and-beyond/>





could help build visibility and trust. Different strategies for engagement were defined to allow for local adaptations, and they ranged from requesting municipality endorsement and participation in dissemination events, to the co-design of collaborative projects.

Ensuring the sustainability of networks was identified as another challenge. Participants agreed on the importance of building on existing networks or merging complementary activities to avoid duplications and ensure continuity.

The need to recognise and integrate informal learning within formal education systems was another topic. Learning outside the classroom should be formally acknowledged and designed to be complementary to school-based learning, with structured partnerships involving community organisations and non-formal education providers.

The integration of innovative approaches with the curriculum, promoting hands-on, project-based, experiential learning, also emerged as a critical challenge and an opportunity. Curriculum integration requires space, time, opportunities, and incentives for educators' continuous professional development. Participants also highlighted that, while innovation is essential, it must be supported by alignment with existing educational standards to avoid being perceived as an additional burden, rather than a new paradigm to teaching.

For this reason, the co-creation of policies is pivotal. Policymakers should engage all stakeholders in the design of Open Schooling, to ensure that new frameworks fill existing gaps and that they are actionable and responsive to teachers' needs.

## Main conclusions

European Commission (EC) speakers emphasized the EU's role as a supporter of science education and open schooling while highlighting the primary responsibility of Member States in education and training. An example of this support was the EU Key Competences Framework<sup>4</sup>, which defines the essential knowledge, skills, and attitudes for lifelong learning, including science and mathematics.

Despite efforts, a fragmented, sectorial approach continues to hinder the full potential of open schooling in developing STE(A)M competences. To achieve systemic change, educational systems must move from single, voluntary projects to coordinated long-term strategies, requiring political will and adequate resources.

Stakeholders' collaboration, at the heart of the SLEs methodology, was an anchor for the events' discussions, revealing the importance of creating local networks of learning spaces, and taking advantage of EU level networks like OS Together and Scientix. Collaboration was also deemed essential to align learning with students' interests as well as broader societal needs, ensuring measurable goals and expectations. Curriculum emerged as another blockage and opportunity to support open schooling for STE(A)M learning, The need to integrate innovation in the curriculum, providing space and time for teachers to bring hands-on, project-based learning in the classroom, was also brought up.

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<sup>4</sup> Key competences for lifelong learning, Publications Office, 2019, <https://data.europa.eu/doi/10.2766/569540>



## 3.2 Event 2: Key Insights from SLEs 1st Policy Learning Session

### Scope

The project's first policy learning session took place right after the project concluded the initial implementation of 13 pilot SLEs<sup>5</sup>, offering the first evidence of how Open Schooling can develop across diverse contexts. This second event aligned closely with the release of the 2<sup>nd</sup> policy brief<sup>6</sup>, which focussed on the strategic support and resources required to establish and sustain SLEs. It also opened discussion towards long-term sustainability, identifying key systemic and cultural factors for scaling similar open schooling projects.

The session showcased how the pilots put into practice the conceptual foundations introduced in the 1<sup>st</sup> policy brief, building on several needs previously discussed. For collaboration with multiple stakeholders to be successful, clear guidelines, flexible framework and a repository of successful practices aligning projects with curricula were found necessary. Another key element that has been raised is teachers' need for recognition and support.

An article about the event is available on the website<sup>7</sup>.

### Participants

A total of 72 participants among industry representatives, researchers, teacher policy makers and informal education representatives (museums, science centres, community centres) joined the event.

Key speakers of the event were: Vincenzo Vespri, adviser for the minister of education in Italy, Melanie Casha Sammut, Director of the STEM and VET programmes education Ministry in Malta, Catherine Franche, executive director of the European Network of science centres and museums (ECSITE), Solveig ary Arnesen, CEO of Viteparken science center in Norway, and Elisa Saraiva, Physics Teacher and Scientix Ambassador from Spain.

### Challenges Raised

Among the challenges raised by participants, a first issue concerned the fragmentation of existing practices. Experiences remain isolated, which hinders evaluation and coordination at central level, and prevents scale-up of promising initiatives. This gap points to the need for a coherent European direction, and increased effort at national level to standardize data collection and evaluation.

Curricular and assessment barriers were also discussed. National curricula still tend to prioritize disciplinary learning and memorisation, instead of transversal competences. Evaluation systems do

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<sup>5</sup> Countries implementing a pilot : Cyprus, Germany, Greece, Ireland, Italy, Malta, Norway, Portugal, Romania, Serbia, Slovakia, Spain, Sweden.

<sup>6</sup> SLEs 2nd Policy Brief: Strategic Support and Resources in STE(A)M Learning Ecologies, [http://files.eun.org/scientix/SLEs\\_2nd-Policy-Brief\\_final.pdf](http://files.eun.org/scientix/SLEs_2nd-Policy-Brief_final.pdf)

<sup>7</sup> STE(A)M Learning Ecologies – Policy Learning session : <https://www.steamecologies.eu/exploring-good-practices-and-policy-recommendations-for-open-schooling-and-steam-at-the-1st-sles-policy-learning-session/>





not provide sufficient flexibility to recognise creativity, collaboration, or inquiry and problem-solving skills. A shift towards competence-based assessment would be a key enabler to foster the adoption of open schooling and interdisciplinary approaches.

Resource constraints and the insufficient integration of STEM professions into educational practices were another prominent topic. Participants highlighted that students often remain disconnected from real-world applications of science, and that closer cooperation with industry could make learning more relevant.

Contributions from teachers echoed the themes raised by the other speakers, pointing to lack of resources, rigid exams and limited autonomy as barriers to long-lasting change in school practices.

### **Main conclusions**

EC representatives iterated that STEM education remains central to the EU's competitiveness and innovation agenda. They emphasised the need for clear definitions of interdisciplinary STEM to unblock progress and highlighted the gap in evaluating existing projects. Called attention to preparing for a shift towards interdisciplinary approaches and addressing gender inequalities in STEM fields.

Inclusion was a key topic addressed by multiple participants. Examples such as Malta's Ministry of Education 'Twin-for-STEM' initiative demonstrated how gender-inclusive practices can improve broader equality and collaboration between boys and girls. This experience showed that entrepreneurship training and peer learning, supported by strong female role models, can empower students to take ownership of their learning.

Informal education providers, such as museums and science centres, were recognized as important supporters of Diversity, Equity and Inclusion. Their extensive networks and community outreach capacities make them ideal hubs for disseminating inclusive practices across Europe.

Insights from VitenParken Science Centre further reinforced the role of cross-sector collaboration in sustaining STE(A)M Learning Ecologies. Its flexible model demonstrated how partnerships between schools, research institutions and local industries can lead to shared ownership of the learning process of students and create real-world experiences in the classroom.

## **3.3 Event 3: 2nd SLEs policy learning session - Celebrating the Achievements of the SLEs Journey and Lessons Learned**

### **Scope**

The project's last policy learning session brought the policy learning cycle to maturity, bringing the focus on scaling and sustainability of the initiative. This event also had a celebratory character, marking the end of the project and included insights and testimonials from some of the pilots. The evidence from the 109 pilots implemented during the project's mature phase, strengthened some of the recurring themes that emerged since the beginning of the project. These themes included the need for funding, continuous professional development, and alignment with national curricula. The pilots demonstrated the added value of addressing these needs, offering concrete examples of how such changes can empower teachers to drive a shift towards more engaging, inclusive, and context-





based learning. The exchanges on these experiences and the following recommendations allowed to validate SLEs' third and last policy brief.

The event was organized after the publication of the STEM Education Strategic Plan (2025)<sup>8</sup>, an important output of the Union of Skills Strategy. European Commission representatives recognized the value of SLEs results in informing future policy instruments, noting that the project's evidence and methodologies could contribute to the design of the upcoming STEM Education Centres and STEM Competence Framework.

An article of the event is available on the SLEs website<sup>9</sup>.

### Participants

55 participants including educators and heads of schools, NGOs, industry representatives, university and research institutes. European Commission representatives from DG EAC and the Research executive agency also joined the event, alongside EU project managers from Horizon funded projects focussed on STE(A)M education, SEER, ICSE Factory and STREAM IT.

Key speakers of the event included Roberta Monachello, Project Officer (REA), Francesca Maltauro, Deputy-Head of Unit (DG EAC, digital education), Maria Podlasek Ziegler, policy officer (DG EAC), Katalin Oborni, Senior Project Manager, HÉTFA (STREAM IT project), Oliver Straser, Vice Director, ICSE/University of Education Freiburg (SEER and ICSE Factory projects), Francesca Sauro, project manager (Essenia UETP, Italy) and Ellen Madigan, educator (Coláiste Nano Nagle, Ireland).

### Challenges Raised

Discussions identified several challenges to scaling open schooling and experiences such as those matured in STE(A)M learning ecologies across Europe.

Firstly, participants noted a persistent implementation gap between policy frameworks and classroom practice. While European strategies consistently reference interdisciplinary learning and a whole-school approach (which is strongly connected to Open Schooling principles), the translation of these principles at national level remains uneven. The lack of a shared definition of STE(A)M as interdisciplinary, project-based and inquiry driven pedagogy was identified as one of the causes for this fragmentation, and the first needed step towards closing the implementation gap across Europe.

Secondly, curriculum alignment emerged as an enabler for change. National curricula and learning objectives should better support the integration across subjects, by articulating transversal learning objectives and encouraging project-based, interdisciplinary experiences for their achievement. In this framework, open schooling activities are integral parts of teaching rather than being peripheral, one-time experiences. Assessment also plays a role in motivating learners and teachers towards this shift, by having evaluation frameworks that reward inquiry, collaboration, and applied problem solving.

Curriculum alignment and revised assessment systems do not guarantee closing the implementation gap in classroom practice, unless teachers are at the core of this transformation. However, while the SLEs experience revealed that many educators are highly motivated to engage with interdisciplinary and community-based learning experiences, they lack time, autonomy, and institutional support,

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<sup>8</sup> <https://education.ec.europa.eu/document/stem-education-strategic-plan-legal-document>

<sup>9</sup> STE(A)M Learning Ecologies – 2nd policy learning session: <https://www.steamecologies.eu/3rd-sles-policy-session/>





placing on them additional workload pressure to sustain change. Short project cycles and fragmented funding further limit continuity, making it difficult for school to consolidate partnerships.

Finally, participants highlighted that, to ensure progress, greater attention must be given to evaluating impact. While qualitative evidence demonstrates that open schooling enhances student engagement, teacher motivation, and critical thinking, systematic approaches to measure long-term effects such as learning outcomes and career choices, remain limited.

### **Main conclusions**

The session confirmed that the SLEs results resonate with- and can feed into the European Commission's STEM Education Strategic Plan and the Action Plan on Basic Skills. For example, by sharing methodologies and experiences from the ground with the upcoming STEM Education Centres and informing the STEM Competence Framework.

Another key insight was educators' need for stable, long-term support mechanisms and funding that go beyond pilot projects, ensuring that collaboration between schools, researchers and local actors can evolve into lasting networks. Support can be multi-layered, starting from organizing a workshop or career orientation session with field experts, to providing teachers with equipment and specialized knowledge for the implementation of projects focussing on advanced technologies or issues, such as hydrogen cells or multiple sclerosis.

Ensuring teachers have protected time to collaborate and plan activities, alongside formal recognition for innovative approaches and accessible professional learning pathways, was identified as a key condition for scaling innovation. Continuous training should strengthen content knowledge, link educators with current research and industry trends, and foster experimentation with new teaching methods.

Finally, the session reiterated the need for a whole-school approach to inclusion to tackle all structural and cultural barriers that prevent women from engaging with STEM subjects.

## **4 Conclusions and reflections**

The policy dialogue and two learning sessions deepened the project's understanding of the conditions needed to scale up Open Schooling and STE(A)M education in Europe. Across all events, participants stressed the importance of curriculum alignment and assessment reform, teachers' time and recognition, sustainable funding, and structured cross-sector partnerships. The discussions also revealed how these priorities vary across national contexts, helping identify both shared challenges and local specificities.

The insights gathered directly shaped the priorities and structure of the policy briefs (D5.1) and their concrete recommendations (D5.3). They highlighted the importance of curriculum and assessment coherence as a core enabler for scale; reframed teacher support as a comprehensive package (time, recognition, professional development); highlighted the need for clear governance linking national coordination with local autonomy and reinforced the importance of evidence and monitoring to sustain impact.

The regular dialogue with EU and national representatives allowed the project to align its findings with current policy frameworks such as the STEM Education Strategic Plan and the Action Plan on Basic





Skills. These connections increase the chances that SLEs methods and outcomes inform future initiatives like the STEM Education Centres and Competence Framework.

The exchanges moved the discussion from inspiring projects to sustainable systems. By linking evidence from practice with policy reform, SLEs helped position Open Schooling as a stable pathway towards more engaging, inclusive and impactful STE(A)M education.

## 5 Appendix

### 5.1 Policy dialogue event - Fostering science education by open schooling and STE(A)M skills development

Science education should be an essential component of compulsory education for all students. Policies should support students, teachers, parents and the wider community to improve access to and provide everyone with the opportunities to pursue excellence in learning and learning outcomes and to ensure young people and adult learners alike are motivated to learn and to be fully equipped to engage in scientific discourse and facilitate further study in science education.

APRE - the Italian Agency for the Promotion of European Research has been involved for years in promoting science education in schools and in bringing the younger generations closer to research and innovation processes, carrying out activities at institutional level and in projects funded by Horizon 2020 and Horizon Europe (e.g., Horizon Europe Young Ambassadors initiative, the illustrated book for kids "What's Bioeconomy"). The Horizon-funded project SLEs - STE(A)M Learning Ecologies aims at developing, implementing and evaluating the STE(A)M Learning Ecologies methodology, an innovative approach enabling the creation of open learning environments fostering science education opportunities for all, based on lessons learnt from previous open schooling projects and in close synergy with the stakeholder community.

This event – organized by APRE in the context of the SLEs project – will bring together European and national policymakers, as well as education, research and innovation stakeholders, in order to:

- Provide an overview of the different science education related policy initiatives launched by the European Commission in recent years, e.g., in the context of the Skills Agenda (Action 7 “Increasing STEM graduates and fostering entrepreneurial and transversal skills”) and the ERA Policy Agenda (Action 14 “Bring science closer to citizens”), as well as the most recent policymaking developments connected with open schooling in science education at country-level.
- Promote and discuss opportunities and blockages of the open schooling approach and STE(A)M skills development to foster science education for European citizens, contributing to evidence-based policy as emerges from EU-funded projects on open schooling, while also providing policy recommendations for the future.
- Raise awareness and develop a shared understanding amongst stakeholders on the importance of science education to ultimately deepen and strengthen the European research and innovation area.

Time	Session
9:30	Registration of participants





Time	Session
10:00	Welcome Beatrice Covassi, Member of European Parliament, ITRE Committee
10:10	Introduction of the event Marco Falzetti, Director, APRE Barbara Quarta, SLEs coordinator, European Schoolnet
10:20	Fostering Science Education for All – What has been done at EU level? Antoaneta Angelova Krasteva, Director for Innovation, Digital Education and International Cooperation, DG EAC, European Commission
10:40	Stakeholder roundtable - Open schooling and STE(A)M skills development to foster science education <i>Moderated by Chiara Pocaterra, Head of Projects Department, APRE</i> <i>Introduced by Laura Mentini, APRE with the Presentation of 1st Policy brief from SLEs project: policy monitoring and first outcomes</i> <ul style="list-style-type: none"> <li>• Karen Slaven, ‘ERA Spreading Excellence and Research Careers’ Unit, DG RTD, European Commission</li> <li>• Maria Podlasek-Ziegler, ‘Schools and multilingualism’ Unit, DG EAC, European Commission</li> <li>• Pavlos Koulouris, Schools as Living Labs (SALL) project, Ellinogermaniki Agogi (EA)</li> <li>• Greta Alliaj, Representative of the Open Schooling Together Cluster, European Network Science Centres &amp; Museums (ECSITE)</li> <li>• Francesco Mureddu, Road-STEAMer, The Lisbon Council</li> </ul>
11.40	Q&A / Intervention and feedback from the audience
11:50	Stakeholder roundtable wrap-up <ul style="list-style-type: none"> <li>• Evita Tasiopoulou, SLEs coordinator, European Schoolnet</li> </ul>
12:00	End of the event

## Questions asked

### 1st round

1. **Question for EC speakers (2 speakers, max. 5’ each):** How, in your opinion, the European Institutions can better support the promotion and fostering of science education as a community development process and encourage a wider adoption of open schooling and STE(A)M skills development?
2. **Question for OS speakers (3 speakers, max. 5’ each):** How can the different stakeholders work together towards the development of effective STE(A)M learning paths for all?

### 2nd round

3. **Question for EC (2 speakers, max. 5’ each):** In what ways can cross-sector collaboration be encouraged to bring research and innovation into school and beyond and to enhance the effectiveness of open schooling and STE(A)M education initiatives?
4. **Question for OS speakers (3 speakers, max. 5’ each):** What are the challenges you encountered in implementing open schooling learning paths in your projects and experiences? How were they solved? / What recommendations would you suggest for future OS project implementation?





## 5.2 1st SLEs Policy Learning Session - Strategic support and resources in STE(A)M Learning Ecologies

Tuesday 24th September 2024, 10:00 – 12:00 CET

### Introduction

APRE and EUN are pleased to invite you to the 2nd STE(A)M Learning Ecologies (SLEs) Policy Learning Session, organised by APRE and European Schoolnet, focusing on "Good Practices and Recommendations for Open Schooling and STEAM." This online event is scheduled to take place on **Tuesday, September 24, 2024, from 10:00 AM to 12:00 PM CET.**

With 13 successful pilot projects and over 600 engaged stakeholders during the first year of implementation, the SLEs project aims to increase young people's interest and involvement in science in 13 European countries through the creation of new local partnerships and civil society a STE(A)M approach to learning by fostering the creation of multiple science education opportunities that involve the whole community in a continuous learning process. In this session, we will share the first results from our pilot initiatives and explore how we can collectively leverage these insights to help advance the future of STEAM by co-creating concrete and tangible policy recommendations.

### Agenda

Time	Session
10:00 – 10:05	Opening, Evita Tasiopoulou, <i>Project &amp; Pedagogical Manager, European Schoolnet</i> Welcome, Roberta Monachello, <i>SLEs Project Officer, Research Executive Agency at European Commission</i>
10:05 – 10:15	<i>Opening Address - Maria Podlasek-Ziegler, Erasmus+: Schools, vocational education and training, skills and adult education</i>
10:15 – 11:15	Roundtable discussion Moderator: Greta Alliaj, Project Manager ECSITE Presentation of preliminary results from 2 <sup>nd</sup> SLEs policy brief: <i>Strategic support and resources in STE(A)M Learning Ecologies</i> , Matteo Anzalone, APRE & Stefania Laneve, APRE Feedback from stakeholders: <ul style="list-style-type: none"> <li>• Vincenzo Vespri, Adviser for the Minister of Education, Activities to develop, enhance and innovate teaching methodologies within STEAM subjects, Italy</li> <li>• Melanie Casha Sammut, Director STEM and VET Programmes, Ministry for Education and Employment (MEDE), Malta</li> <li>• Catherine Franche, Director, ECSITE</li> <li>• Solveig Mary Molvær Arnesen, Vitenparken, Norway</li> <li>• Elisa Saraiva, Scientix Ambassador</li> </ul>
11:15 – 11:35	Short presentation and feedback from ICSE Science Factory project and LEVERS.
11:35 – 11:50	Q&A with audience
11:50 – 12:00	Wrap up & next steps





### Questions Asked

#### **To Vincenzo Vespri (Adviser for the Minister of Education, Italy)**

- Given your experience in developing and innovating STE(A)M approaches in Italy, what policy changes/reforms do you believe are necessary to further integrate STE(A)M and Open Schooling into the national curriculum in Europe? What in your opinion are the main challenges to transitioning from STEM to STEAM and integrating innovative STEAM approaches into national policies and curricula?

- How good practices/effective strategies, already applied in Italy, in relation to STE(A)M education, interdisciplinarity and professional development can be of benefit to the project and practices across Europe?

#### **To Melanie Casha Sammut (Director STEM and VET Programmes, Ministry for Education and Employment, Malta)**

- What lessons can be drawn from Malta's GirlsforSTEM initiative that could be applied to increase gender inclusivity across other SLEs pilot projects, particularly in traditionally male-dominated STEM fields?

- Considering the challenges faced by teachers in Malta when implementing new methodologies, how can we better support educators to overcome these obstacles and effectively integrate STE(A)M and Open Schooling into their teaching practices?

#### **To Catherine Franche (Director, ECSITE)**

- What is the role of science centres and museums like those within ECSITE to the development and sustainability of STE(A)M Learning Ecologies across Europe?

- In what ways can ECSITE's network facilitate stronger collaboration between informal education providers and schools to create more impactful and widespread open schooling initiatives? Can you suggest some good practices in place?

#### **To Solveig Mary Molvær Arnesen (Vitenparken Norway)**

- How can the collaborative model utilized in Vitenparken's projects be adapted to support STE(A)M Learning Ecologies across different European contexts, considering the varying levels of community engagement and resources? Can you tell us a bit more about it?

- What strategies have you found most effective in sustaining long-term partnerships with local communities, schools and industries within the Vitenparken initiatives, and how can these be applied to ensure the sustainability of STE(A)M projects across Europe?

#### **To Primary and Secondary School Teachers and Heads of Schools**

- What are the key challenges that primary and secondary school teachers face when trying to implement STE(A)M Learning Ecologies in their daily work, and how can policy recommendations address these to support effective integration?

- How can the findings from the SLEs pilot projects be used to enhance teacher training programs, particularly in equipping teachers to handle interdisciplinary and community-based learning approaches? Is there any other institutional support you would need to effectively implement open schooling and STEAM approaches in your school/classroom?





## 5.3 2<sup>nd</sup> SLEs Policy Learning Session - Scaling STE(A)M Open Schooling in Europe: Celebrating the Achievements of the SLEs Journey and Lessons Learned

Thursday 23<sup>rd</sup> October 2025, 10:00 – 12:30 CET

### Introduction

We are pleased to invite you to the 3<sup>rd</sup> STE(A)M Learning Ecologies (SLEs) Policy Learning Session, organised by APRE and European Schoolnet, focusing on "Celebrating the Achievements of the SLEs Journey and Lessons Learned" for policy. This online event is scheduled to take place on Thursday, **October 23, 2025, from 10:00 AM to 12:30 PM CET.**

With 109 successful pilot projects and over 450 engaged stakeholders during the project implementation, the SLEs project worked on increasing young people's interest and involvement in science in 16 European countries. Through the creation of new local partnerships and civil society a STE(A)M approach to learning by fostering the creation of multiple science education opportunities that involve the whole community in a continuous learning process has been developed and implemented. In this session, we will share and celebrate the results from our mature pilot initiatives, the good practices that have emerged and explore how we can collectively leverage these insights to help advance the future of STE(A)M Education and Open Schooling by co-creating concrete and tangible policy recommendations.

### Agenda

Time	Session
10:00 – 10:20	<b>Welcome and Reflections: Celebrating the STE(A)M Learning Ecologies project</b> <b>Opening, Evita Tasiopoulou, Project &amp; Pedagogical Manager, European Schoolnet</b> <b>Welcome, Roberta Monachello, SLEs Project Officer, Research Executive Agency at European Commission</b> <b>Moderator: Stephanos Cherouvis</b>
10:20 – 10:50	<b>STE(A)M Learning Ecologies stories: Testimonials from stakeholders from different SLEs &amp; countries.</b>  Francesca Sauro and Giovanna Palumbo, Essenia, Italy Ellen Madigan, Coláiste Nano Nagle, Ireland.
10:50 – 11:50	<b>Roundtable discussion</b> <b>Presentation and validation of 3<sup>rd</sup> SLEs policy brief: Scaling STE(A)M Open Schooling in Europe: Policy Lessons from SLE Pilots, Laura Mentini, APRE &amp; Stefania Laneve, APRE</b>  Opening by <b>Francesca Maltauro – DG EAC</b>  <b>Feedback from stakeholders:</b> Maria Podlasek Ziegler – DG EAC Katalin Oborni – STREAM IT Oliver Straser - the SEER /ICSE Factory
11:50 – 12:10	<b>Q&amp;A with audience</b>
12:10 – 12:30	<b>Wrap up &amp; next steps</b> SLEs Governance Framework Supporting SLEs beyond the project's duration





### Questions asked

#### **Maria Podlasek Ziegler (DG EAC)**

From your perspective, how can SLEs be embedded into existing European and national strategies and initiatives (STEM Education Plan, GreenComp, Digital Education Action Plan)?

#### **Katalin Oborni – STREAM IT**

Based on your experience with STREAM IT, what are the most concrete levers to make STE(A)M education more inclusive and gender-responsive? How can projects reach marginalised students and strengthen equity in access to STEM?

#### **Oliver for the SEER /ICSE Factory**

From your experience in the SEER and ICSE Factory projects, what collaborative mechanisms and practices among different stakeholders (e.g., schools, policymakers, researchers, and industry) have proven most effective in supporting teachers' professional development and inspiring young people to pursue science and technology careers? Based on these experiences, what recommendations would you make to ensure the sustainability and impact of such initiatives at national and EU levels?

#### **Question for all**

In your view, what are the most urgent steps the European Commission should take in the next 2–3 years to bring Open Schooling and STE(A)M education from pilot projects to systemic reality?

