# 1 SLE evaluation survey templates

To facilitate the evaluation of the SLEs which were implemented in various countries and settings, we devised the following list of statements categorized in a sequence of templated forms/questionnaire that focus on different dimensions of an SLE. The survey is to be addressed to initiators and educators/lead teachers or to the whole group of stakeholders who can utilize it for guidance or as a preliminary list of indicative statements that can help them to characterize their observations from the overall educational activities they tried out during the implementation phase. In general, initiators/teachers are also encouraged to suggest their own list of statements or key elements in addition to the proposed ones. The level of agreement to each statement or observation is quantified by a score indicator in scale from 1 to 5 according to the following table. This is to assist project partners in the analysis of the results.

| Score scale | Interpretation |
|---|---|
| 5 | Strongly agree |
| 4 | Agree |
| 3 | Neither agree nor disagree |
| 2 | Disagree |
| 1 | Strongly disagree |

### 1.6 General Aims and Objectives: Towards which skills or transversal competencies are students oriented in the SLE?

| General Aims and Objectives: Towards which skills or transversal competencies are students oriented in the SLE? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Creativity and innovation | | | | | |
| Critical thinking and problem solving | | | | | |
| Communication and collaboration | | | | | |
| Literacy in ICT and new technologies | | | | | |
| Independence, initiative and self-direction | | | | | |
| Deconstruction of gender stereotypes | | | | | |
| Ownership of results/achievements | | | | | |
| Leadership and responsibility | | | | | |
| Exposure to real-life situations and problems | | | | | |
| Interest and motivation towards science studies and science careers | | | | | |

### 1.7 What have students actually learned or what are they able to do after completing the educational activities of the SLE?

| What have students actually learned or what are they able to do after completing the educational activities of the SLE? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Students have improved or advanced their critical thinking and problem-solving skills | | | | | |
| Students are able to start a design process to solve a given problem | | | | | |
| Students have advanced or improved their content and concept knowledge of STEAM curriculum topics | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Students are able to initiate or follow an inquiry process and actions towards a predetermined goal | | | | | |
| Students are able to reflect on or self-assess their learning progress, and have gained confidence and independence on acquiring knowledge and skills | | | | | |
| Students have improved or advanced their ICT and new technologies literacy | | | | | |
| Students have increased their interest and motivation towards science studies and science careers | | | | | |
| Students have improved or advanced on interdisciplinary and collaborative learning | | | | | |
| Students have improved or advanced on deconstruction of gender stereotypes | | | | | |

### 1.1 How is the group of stakeholders involved in the SLE facilitating learning?

| How is the group of stakeholders involved in the SLE facilitating learning? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Takes into consideration students' prior knowledge, skills, competences, attitudes, beliefs, learning styles and experiences and accordingly organize appropriate learning activities | | | | | |
| Makes explicit connections between specific content knowledge and educational activities | | | | | |
| Is an active facilitator for inquiry- and creativity-based learning, for example by encouraging students' decision-making during inquiry processes, and sharing, evaluating and reflecting on outcomes | | | | | |
| Provides students step-by-step guidance during the educational activities | | | | | |
| Fosters creativity and problem-solving skills by being more like a mentor or coach instead of someone who will give all the answers | | | | | |

### 1.8 Where, with whom or how are students learning in the SLE? E.g. are they better learning individually, in small groups, or whole-class?

| Where and with whom or how are students learning in the SLE? E.g. are they better learning individually, in small groups, or whole-class? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| When students are provided with flexibility to choose from a range of learning trajectories according to their preferences and working styles (individually or in groups) | | | | | |
| When the same educational activity is implemented in whole-class | | | | | |
| By promoting team working and collaboration in small groups | | | | | |
| By emphasizing students to work individually and independently | | | | | |
| By providing interaction and interdisciplinary collaboration opportunities among students of different skills and competences | | | | | |
| With educational activities that take place in a variety of learning environments in- and out-of-school, including e.g. science centers, museums, natural habitats, research institutes, enterprises, fablabs | | | | | |
| When educational activities take place in classroom or in school environment | | | | | |

### 1.9 How are learning activities in the SLE increasing female participation and deconstructing gender stereotypes?

| How are learning activities in the SLE increasing female participation and deconstructing gender stereotypes? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| By providing students with same-gender role models or success stories | | | | | |
| By encouraging collaboration rather than competitiveness among groups or individuals | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| By promoting tasks or team working with female-only groups | | | | | |
| By encouraging students to work in gender balanced teams | | | | | |
| By providing interaction and collaboration opportunities with female role models/mentors | | | | | |
| By offering educational activities that put emphasis on skills and competences and not on gender | | | | | |

### 1.10 What have educators learned from or what are they able to do after completing the educational activities of the SLE?

| What have educators learned or what are they able to do after completing the educational activities of the SLE? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| The experience of designing and implementing the SLE significantly contributes to the professional growth and development of educators, supporting the adoption of innovative STEAM teaching methodologies. | | | | | |
| SLEs helped educators to effectively integrate SLEs principles into their everyday teaching practices also in the future | | | | | |
| Adequate support and educational resources provided to educators by other stakeholders enhance their confidence and capability in implementing the SLEs project, resulting in improved teaching quality | | | | | |
| Collaborative engagement and interaction with other colleagues and stakeholders enrich the implementation experience for educators, fostering a supportive professional community focused on student learning and engagement. | | | | | |

## 1.11 is the current policy framework in your context helping or restricting the implementation of the SLE?

| Is the current policy framework helping or restricting the implementation of the SLE? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| The administrative or bureaucratic burden on the school has been an obstacle for the implementation of this initiative | | | | | |
| The public administration (at any level) supports the adoption of initiatives linked to interdisciplinarity and STE(A)M | | | | | |
| The public administration (at any level) supports the adoption of initiatives linked to multistakeholder partnerships in education | | | | | |
| The equipment, infrastructures and/or setting available was supporting the implementation of this activity | | | | | |
| The administrative or bureaucratic burden on the stakeholders has not been an obstacle for the implementation of this initiative | | | | | |

Based on your answers to the questions above, please write which policies, **national frameworks or formal policy tools** in your local or national context facilitate the implementation of open schooling and STEAM in education.

Examples of policy tools can be dedicated moments in the curriculum for interdisciplinary projects, or enhanced autonomy of schools and teachers to implement such projects. If there aren't any, why do you think that is (E.g. not a priority for the policy makers, not in line with existing curricula, etc.)?

### 1.12 Which of the following challenges have you encountered in implementing your SLE?

| Which of the following challenges have you encountered in implementing your SLE? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Lack of understanding around STE(A)M education | | | | | |
| Lack of teacher training | | | | | |
| Lack of time for preparation and collaboration between stakeholders | | | | | |
| Lack of resources | | | | | |
| Difficulty to approach and connect to appropriate stakeholders | | | | | |
| Curriculum constraints | | | | | |
| Policy and institutional constraints | | | | | |
| *Please elaborate:* Are there any **other** obstacles/challenges you encountered during the implementation of your SLE? | | | | | |

### 1.13 How effective were the collaborative efforts between stakeholders (e.g., educators, administrators, policymakers, community members, industry partners) in planning and implementing the SLE?

| How effective were the collaborative efforts between stakeholders (e.g., educators, administrators, policymakers, community members, industry partners) in planning and implementing the SLE? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| The collaborative efforts among stakeholders significantly contributed to the success of the SLE | | | | | |
| Stakeholder collaboration enhanced resource-sharing, expertise exchange, and support for innovative educational approaches | | | | | |
| Collaboration fostered a sense of ownership and commitment among stakeholders towards the goals of the SLE | | | | | |
| Challenges in establishing or maintaining partnerships with other stakeholders impacted the implementation and effectiveness of the SLE | | | | | |
| Partnerships with external entities helped ensure long-term sustainability, replication and growth of the SLE beyond the initial implementation phase | | | | | |
| We are willing to formalize this partnership and keep working together in the SLEs framework, also expanding it with the participation of other stakeholders | | | | | |

*Please elaborate:*

Did the collaboration with some stakeholders (eg. Students, parents, the local community, universities and/or industries) create **new opportunities** within your current SLE, or for future iterations of the project?

(For e.g , one stakeholder bringing others onboard, or offering to continue the collaboration in the future, or connecting you with others who could help you realize your SLE. )

1.14 To what extent did partnerships with external organizations or institutions (e.g., universities, businesses, NGOs) contribute to enriching students' learning opportunities and engagement?

| To what extent did partnerships with external organizations or institutions (e.g., universities, businesses, NGOs) contributed to enriching the students' learning opportunities and engagement? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Partnerships with other stakeholders provided educators with valuable resources, expertise, and real-world connections for students' STE(A)M learning experiences | | | | | |
| Collaboration with external partners facilitated access for educators to specialized facilities, technologies, or mentorship opportunities enhancing the quality and engagement of educational activities in STE(A)M. | | | | | |
| Stakeholder partnerships facilitated access to diverse perspectives, resources, and opportunities for students' engagement STE(A)M learning and improvement of their competences. | | | | | |
| External partnerships fostered opportunities and provided students with new competences that support their careers in the sector (i.e. "doing like researchers", through role models etc.) | | | | | |
| External partnerships have fostered opportunities to involve and attract young females in STEM education and contributed to a reduction of gender gap in the field. | | | | | |

Would you be able to autonomously **replicate or sustain** the project in the future? What resources or support systems would be necessary to facilitate the replication, sustainability or upscaling of the project in the future/after project ends?

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| Do you have any comments or remarks with regards to some of the chosen answers in this survey? You can add them here. |