

Responsible Research and Innovation in Action

Towards an open science and innovation system that tackles the societal challenges of our world

RRI Tools Final Conference

SESSION F: Learning by doing

Moderated by: Rosina Malagrida, Head of Living Lab for Health, IrsiCaixa AIDS Research Institute. Viola Pinzi, Science Projects Officer, European Schoolnet (EUN).

Format: Market place session with posters + interactive exercise

Abstract: This session will focus on how we can incorporate the principles and practices of RRI in a responsible and open way of doing in the education of the researchers, innovators and citizens of tomorrow.

Short description: The session will start with a “market place”, showcasing 12 examples of EU-funded projects tackling different approaches for the implementation of RRI in educational processes. Following, moderators will facilitate an interactive discussion on phases of the R&I process and levels of participation at which different actions can intervene, involving participants and projects’ representatives.

List of speakers:

1. Tuula Keinonen, School of Applied Educational Science and Teacher Education, University of Eastern Finland. MultiCo project (Promoting Youth Scientific Career Awareness and its Attractiveness through Multi-stakeholder Cooperation)
2. Mirozlaw Brzozowy, Faculty of Physic, Warsaw University of Technology. STEM4youth project
3. Nuria Salade, University Pompeu Fabra. HEIRRI project (Higher Education Institutions and Responsible Research and Innovation)
4. Jozefien De Marrée, Science Shop/Science Outreach Office, Vrije Universiteit Brussel. EnRRICH project (Enhancing Responsible Research and Innovation through Curricula in Higher Education)
5. Alexandra Okada, Knowledge Media Institute at the Open University. ENGAGE project (Equipping the Next Generation for Active Engagement in Science)
6. Evita Tasiopoulou, European Schoolnet. STEMAlliance initiative
7. Laura Tamassia, UC Leuven-Limburg. Quantum Spin-off project (Connecting schools with high-tech research and entrepreneurship)
8. Andrea Troncoso, ECSITE. SPARKS project (Rethinking innovation. Together)
9. Isabel Ruiz-Mallén, IN3-Universitat Oberta de Catalunya, and María Heras-López, ICTA-Universitat Autònoma de Barcelona. PERFORM project (Participatory Engagement with Scientific and Technological Research through Performance)

10. Josep Carreras, Education and Public Engagement at Living Lab for Health, IrsiCaixa. Xplore Health project
11. Meie van Laar, NEMO Science Museum. HYPATIA project
12. Ilse Marshalek, Zentrum for Social Innovation. NanOpinion project (Monitoring public opinion on Nanotechnology in Europe)

Programme of the session		Activity	Length
10.30	Session introduction	<p>Introduction to session programme</p> <p>Introduction to participants</p> <p>Introduction to the evolution of STEAM education to fulfil RRI requirements</p>	10 min.
10.40	Market place	<p>Participants move around the room to visit posters and find out about projects presented. Short presentations of posters by one representative standing by the posters which are located around the room (think about 3 messages, sell your product within maximum 5' presentations). Presenters should try to highlight very briefly the levels of participation of different actors within the project and the phases of the R&I process where such participation takes place.</p>	30 min.
11.10	Interactive exercise (see Annex 1 and 2 for explanations)	<p>Presentation of exercise</p> <p>Question 1: Collaboration during different phases of R&I within the learning process</p> <p>Question 2: Levels of participation of different stakeholders during the learning process</p> <p>Question 3: Time for collective reflection</p>	<p>5 min.</p> <p>5 min.</p> <p>5 min.</p> <p>30 min.</p>
11.55	Closing remarks		5 min.
12.00	End of session		

Annex 1. Description of interactive exercise

Presentation

During the presentation of the exercise, the convenors introduce **the phases of R&I** where different stakeholders are called to collaborate within RRI (programme development, project definition, project execution, implementation, evaluation, dissemination) and the **ladder of participation** (communication, consultation, involvement, collaboration, delegated power) – see Annex 2 for explanations.

Question 1. COLLABORATION DURING DIFFERENT PHASES OF R&I:

The educational projects presented promote collaboration of different stakeholders during different phases of the R&I process. In which phases did/do you promote collaboration?

The speakers are invited to go to the stage and position themselves above different signs located on the floor indicating the different phases of the R&I process. They will choose where to be located depending on the phase where they promote participation of different actors within their educational projects.

Question 2. LEVELS OF PARTICIPATION:

The educational projects promote different levels of participation among the different stakeholders during the learning process. Which sort of participation are you promoting?

The speakers are invited to take a card or different cards indicating one of the different levels of participation. They will choose the card/s depending on the level of participation of different actors within their educational projects.

Question 3. Collective reflection

Facilitators choose 4 volunteers among the speakers to briefly explain (3 min maximum):

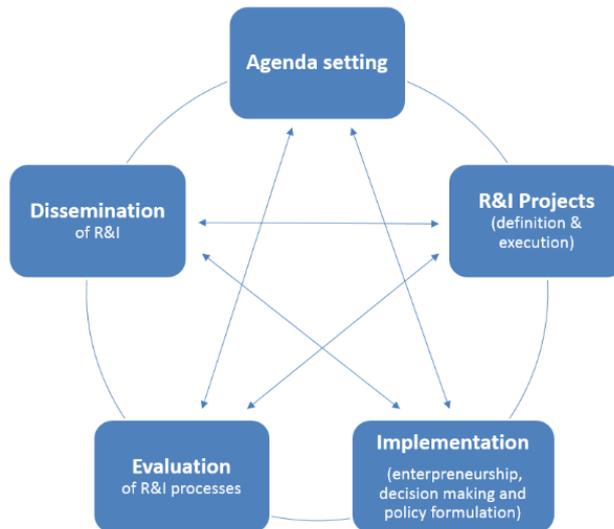
- Why they chose the locations and cards.
- How they could improve the level of participation or the engagement in the phases where they open the process (obstacles and opportunities)

The facilitator invites the audience to participate. The public is invited to join the stage to fulfil the spaces that are empty and to briefly explain how their project facilitates participation at that phase of the process of R&I.

Annex 2. Explanation of “phases of R&I” and “ladder of participation”

Phases of the R&I process

RRI can be applied at multiple phases of the process: from upstream to throughout. Find below a brief description of these phases as described by the project [Engage2020](#):



BEFORE STARTING A R&I PROCESS

a) Program definition: Setting the R&I agenda

To help different stakeholders to integrate and prioritize R&I topic lists to end up setting together the agenda of R&I programmes.

DURING THE R&I PROCESS

b) Project definition: Defining the R&I process with permanent adjustment

To consult stakeholders to monitor R&I through deliberative processes (for example through community advisory boards or living labs for open innovation).

c) Project execution: Co-development of R&I

To equitably involve a diversity of partners in performing the processes of R&I (for example through engagement processes such as community based research and citizen science projects where the involvement is not restricted to data collection).

DURING IMPLEMENTATION

d) Entrepreneurship:

To convert research results into services or products by developing business ideas, doing technology transfer projects and creating companies.

e) Supporting decision making and participatory policy development based on scientific evidence:

To accompany decision making and policy decisions in the field of science and technology with broad analysis and democratic practices aimed at analysing together the preconditions and also doing foresight analysis of the impact of the implementation of new technologies (for example through methodologies of “Interactive Technology Assessment (TA)”, mainly working for Parliaments).

Evaluation of R&I processes

To evaluate the quality of research and innovation in terms of scientific excellence and RRI quality criteria and with the collaboration of different stakeholders.

Dissemination

To share all phases of the R&I process with the different stakeholders and the public at large.

Levels of participation

- Communication (to disseminate knowledge)
- Consultation (to obtain public feedback),
- Involvement (to work with public to consider its input),
- Collaboration (to partner with the public in each aspect of the decision making)
- Delegated power (to let the public decide), among others