Vespucci Training School

on Digital Transformations in Citizen Science and Social Innovation

FINAL REPORT

A training school co-funded by JRC (www.vespucci.org) and COST Action 15212 Citizen Science to promote creativity, scientific literacy, and innovation throughout Europe

Contribution to CS participation practices with regard to global grand challenges (Task 2), WG 4 COST Action 15212

EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

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General Information

Date: January 21-15, 2019
Venue:
Fattoria di Maiano, Via Benedetto da Maiano, 11, 50014 Fiesole FI, Italy
Website: http://fattoriadimaiano.com/
Nearest airports: Florence and Pisa; Nearest railway station: Florence.

Language of the training school: English

Organization Committee:

- Sven Schade, European Commission DG Joint Research Centre (JRC), Ispra, Italy
- Marisa Ponti, European Commission DG Joint Research Centre (JRC), Ispra, Italy
- Cristina Capineri, University of Siena, Italy (local organiser)

Lecturers/Facilitators (confirmed) - more to be added when confirmed:

- Muki Haklay, University College London, UK
- Sven Schade, JRC
- Cristina Capineri, University of Siena, Italy
- Marisa Ponti, JRC

More to be added when confirmed

Report about the Vespucci Training School on Digital Transformations in Citizen Science and Social Innovation

A training school co-funded by European Commission Joint Research Centre and COST Action 15212 Citizen Science to promote creativity, scientific literacy, and innovation throughout Europe

This training school (TS) was a five-day event for doctoral students, researchers, policymakers, civic entrepreneurs, designers, and civil servants who were interested in exploring and learning about:

1. how Citizen Science (CS) can be understood and/or used as a strategic or intentional approach to social innovation;
2. the intertwinement of social innovation with socio-technical developments, including the impacts of digital transformation;
3. the relationship between policy framing, participatory research, and social innovation.

Twenty-one participants took part, selected on the quality and relevance of the CVs and motivation letters provided as part of their application procedure. Their backgrounds were diverse, ranging from law and technology to public health and geoinformatics. About 57% were women. Eight participants (about 38%) were from six Inclusiveness Target Countries: Albania, Estonia, Hungary, Turkey, Portugal and Lithuania. Twenty were Early Career Investigators. Five trainers held lectures and facilitated group work: Cristina Capineri (University of Siena), Muki Haklay (University College London), Marisa Ponti (JRC Ispra), Sven Schade (JRC Ispra), Mara Balestrini (CEO of Ideas for Change, Barcelona, Spain), Stefan Daume (Founder and Chief Data Wrangler at the Scitingly Project, Stockholm Sweden).

The week programme was a mix of keynotes, short presentations by the participants on their work, hands-on citizen science tools and group work to develop research proposals. The keynotes addressed different aspects of citizen science projects, such as data management, ethics and privacy, participation and funding, but it particularly focused on social innovation and co-creation. It is important to recognize that there are different types of Citizen Science projects, as different types involve different aspects, from participation and choice of technologies to methodologies and funding.

Group projects provided an opportunity for all the participants to interact closely with each other in a multi-disciplinary setting and to overcome language barriers. They also generated in a very short time some very good ideas for projects that were presented on the last day of the event. They addressed a wide range of topics such as factors of success and failure of social innovation, long term participation vs short term engagement, CS project evaluation, and policies for fostering CS.

In order to receive useful feedback, the participants produced short reports on what they had learnt, as well as on the outcomes and prospective collaborations. Some interesting and useful suggestions for future training schools emerged from these reports. The reports were very positive.

What they learnt about. Topics included, among the others:

- Evolution of CS
- CS terminology
- Social innovation
- Levels of engagement
- Business models
- Ongoing and successful case studies

- Presentation skills
- COST programme framework

What they appreciated:

- Group work
- Multidisciplinary approach
- Confrontation with different cultural background of the participants
- Good food and nice location
- Different mentors with diverse profiles and expertise

What they suggested:

- More practical work
- More dynamic day schedule
- More “informal meetings” among participants (e.g. walks, tea breaks)
- PS the weather did not help (snow, rain)

Future collaboration:

- Take part in EU project proposal
- Co-author scientific papers

General evaluation: ***High: very inspiring, intense and relaxing all at the same time***

Suggestions for improvement primarily include:

- More dynamic days, e.g. with active team building on day one, physical activities, longer breaks but longer days, etc.
- More structure for group work.
- More dynamics, e.g. groups per day with short assignments, rotations, etc.
- Actual training on how to deal with groups.
- Joint work of all on data collection, one joint paper, hack night, etc.
- Practical session e.g. working with data.
- One on one sessions with the trainers, or open meetings with them on particular topics.
- Organizing some action for after the training school.
- Discuss options on how to create new CS and SI projects (using digital technologies).
- Suggestion of a film night session (it could be in the beginning of the Training School), e.g. with “Demain” [Tomorrow] documentary by Cyril Dion and Mélanie Laurent, https://www.demain-lefilm.com/en , to bring a fresh perspective on different issues and social challenges.

Below statements I found particular worth to highlight. Maybe you can check, add yours and we select a few for the final report…

I have seen a new possibility to point out my own research.

I was also amazed by hearing how ecology can help us understanding societal transformations.

We had many vibrant discussions around the topic as we were all very enthusiastic, passionate and full of ideas, which I appreciated a lot.

This training was very important for me because I learned new knowledge for social science and social innovation; learned new forms and software for presentation; learned new skills and created connection with other colleagues from different countries to collaborate for different projects or scientific papers.

Furthermore, this training definitely helped me to figure out ways to build new forms of collaborative socio-technical development for social innovation, analyze case studies, and apply them in defining principles for citizen science projects with different aims and goals. It was surely and more importantly a great opportunity to meet other professionals in different and similar domains.

Tutors were very supporting, and experts in their domains. QA, discussions and workshops were helpful. Mentorship was insightful and constructive.

Variety of the lecturers and their profiles helped to create 'completed view' on the ongoing processes not only the topic of winter school, but as well in how the COST works, what are the EU novelties and of course, the best impact is- the created links between the participants.

This information made a direct impact on my PhD work, as it helped to structure (update a framework) of it.

An absolutely safe and inspiring environment for work, reflections and to connect. Tutors were available and supporting, mentorship was adequate and insightful, as well as the right proportion of practice and theory. The contributions of the speakers was very valuable and insightful, with fruitful discussions. The ambience was accepting and constructive, the participants were well- selected so all could share and connect.

During the training school I learned a lot about citizen science and social innovation. My knowledge of these topics was small before the training school and during the training school I got better picture of different terms that are used in citizen science projects (e.g., co-creation, matters of concern, matters of care, community of practice).

During the week we have learnt from colleagues the specific situation in different countries. Also, how various projects are approached from other disciplines, which brought the understanding for thinking about possible collaborations.

Besides learning about citizen science and social innovation, I got to know more about COST actions and how I can make use of it to build a network.

It was not always easy, it was frustrating at some point, but it was a huge learning experience that I am grateful for.

I think it could be an interesting example to explore of how data collected from citizens, engaged in a citizen science project, can be linked to governmental dataset.

After the Training School, besides the suggested materials, I also did some extra research on several topics and I am taking further readings on:
Citizen Science and Public Health;
Citizen Science and European Environmental Policy; Integrating Citizen Science information with Governmental data

We achieved this through 15 minutes long interviews with the 6 course trainers, to whom we addressed a common question aimed at deepening their vision of values within their activities.
It was very interesting to notice how value was differently perceived by each of the trainers, as well as spot patterns based on their expertise and field of action. It was also very inspiring how the same value was approached in different ways by each trainer, and how the value perception varied based on which stakeholder group was benefitting the most out of it.

I was not familiar with the concepts of Citizen Science and Social Innovation before the school. But now I have a good knowledge about these concepts thanks to the great facilitators.
[…]
Meeting and engaging people from other disciplines and other cultures always such a great opportunity thank you so much for your all efforts that made this event very successful.

Thank you for organising this interdisciplinary opportunity, I found it very inspiring, intense and relaxing all at the same time. The facilitators were very approachable and very generous with their time and their experience. The talks were full of useful and interesting information and ideas.

Our target is to submit a scientific paper by the end of 2019 and we are also investigating funding opportunities and events that would allow us to meet again face to face (e.g. applying for STSM).

The main valuable thing of this training school is in my opinion its members. There is nothing more effective than learning and working with leading personalities in this area. The diversity of the participants representing different countries allowed us to obtain a different look on the issues discussed and the methods of solving them.

One of the obvious results was the fact, that the concept of data, the collection of data and data management, and the data itself are one of the most important, or probably the most important value which can be produced while working on citizen science projects. So in general the data itself and its usage as an evidence and as a deep argument during the negotiations for creating the political pressure seems to be one of the most important values emerging from the interviews.

As a rule, the value of a usual project is estimated only if it has been successfully completed, and the reaching of the planned goal (in the form of solved problems or created products, etc.) is the value itself. In the case of an unrealized or unfinished project, it is usually related to as unsuccessful and the effort spent on it is in vain. But in the field of citizen science projects the

situation is completely different. Projects of this kind are almost impossible to plan accurately, and the goal achievement is not at all guaranteed. But immediately after the start of the project, and even after the start of its planning, all of its direct participants start to receive their additional value from the participation, from building a community, from the start of dealing with the problem, etc. The very fact that people are introduced to new areas of knowledge and skills is the key factor, and the project implementation process is no less valuable than its successful completion.

After attending this training school, I am very optimistic about applying my previous research experience and ideas for my future research works for social innovation.

List of Participants

Last Name	First Name	Affiliation	COST Member/ Cooperating State or Near-Neighboring Country
Berti Suman	Anna	Tilburg Institute for Law, Technology, and Society, Tilburg Law School; from November '18 Visiting Scientist at the JRC, Dir. B	NL
Ajates Gonzalez	Raquel	GROW Observatory / University of Dundee	GB
Portela	Manuel		ES
Mazzonetto	Marzia	Consultant	BE
Fraisl	Dilek	International Institute for Applied Systems Analysis (IIASA) & University of Natural Resources and Life Sciences, Vienna (BOKU)	AT
Albert	Acedo Sanchez		ES
Mazaj	Jelena	UNIPA /CESIE	IT
Gupta	Shivam	University of Muenster	DE
Ngo	Manh Khoi	Universitat Jaume I	ES
Ferreira- Lopes	Patricia	University of Seville	ES
Madruga de Brito	Mariana	University of Bonn	DE
Alvanides	Seraphim	Northumbria University at Newcastle, UK	GB
Mukhametov	Sergey	Institute for Geoinformatics, University of Muenster	DE
Kori	Külli		EE
YERLI	OZGUR		TR
Oliveira	Marta		PT
Bingül	Meryem Bihter		TR
Faludi	Julianna	Corvinus University of Budapest	HU
Salamov	Gulbala	HACETTEPE UNIVERSITY, TURKEY	TR
Veress	Tamas	Corvinus University Budapest - Business Ethics Center	HU
Tartari	Elda	Lecturer and Researcher at Aleksander Moisiu University of	AL

Aim and Goals of the Training School

This training school is a five-day event for doctoral students, researchers, policymakers, civic entrepreneurs, designers, and civil servants who are interested in exploring and learning about:

1) how citizen science can be understood and/or used as a strategic or intentional approach to social innovation;
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Context: Citizen Science Beyond the Narrow Framing of Public Engagement in Scientific Research

Citizen science has gained popularity not only in the scientific community but also with the public. It holds the promise of fostering an open and participatory approach to science, reducing the distance between science and society and contributing to the goal of an inclusive society. While citizen participation in citizen science projects is still often reduced to collecting or processing data, the citizen science landscape is much broader and diverse. When considering the full potential of citizen science, not only should we pay attention to answering scientific questions and generating valid data, but also to the possible pressures, drivers and effects on society and social innovation.

Drawing on Soule, Malhotra, Clavier (https://www.gsb.stanford.edu/faculty-research/centers-initiatives/csi/defining-social-innovation), we define social innovation as the practical development and implementation of new products and services which meet social needs and support social progress, and often require the active collaboration of constituents across government, business, the nonprofit world, and civic organizations. Instead of emphasizing science communication, data collection or the framing of research policy, we see a strong need to address and examine issues of social value, social progress and the foundations for systemic changes.

So, what is the relationship between citizen science and social innovation? In the context of social innovation, the idea that citizen engagement is critical to the development and implementation of new solutions is often regarded as a self-evident truth, in order to build trust in public institutions and lend greater legitimacy to public decision-making processes (Davies & Simon, 2013). However, most potential participants are citizens and not citizen scientists, and when we need to develop solutions that meet social needs, we need to develop solutions for all. The role of citizen science in supporting social innovation to tackle social challenges and lead to more effective and more legitimate solutions needs to be examined.

The Role of Digital Technologies in Engaging Citizens (not only Citizen Scientists) in Social Innovation

With the widespread availability of cheap, ubiquitous and powerful tools like the internet, the world-wide web, social media and smartphone apps, new ways of carrying out both citizen science and social innovation have become possible. Often this means that barriers for citizens to engage in both science and social innovation have been lowered in terms of communication, outreach and scaling and thresholds for participation have also been lowered.
There is an enormous potential for these technologies to strengthen the role of intermediary civil organizations and communities, and thereby to re-balance the playing field in favor of a broader range

of actors - even those who do not use Information and Communication Technologies (ICT) (Millard & Carpenter, 2014). ICTs can also help citizen engagement in policy framing by facilitating their involvement throughout the policy cycle, from agenda setting to service design and provision up to policy impact evaluation, creating new roles for stakeholders and enabling new power relations (Misuraca, 2017).

However, digital technology should also be put in context, as it is often not leading edge but existing off-the-shelf technologies that are used in social innovation. Thus, technology must always be seen in its close intertwinement with the actual world of people, places, and digital skills people may or may not have.

Participants in this training school will learn about the relationship between citizens and research, the opportunities and challenges of citizen science for social innovation, the role of digital technologies in engaging citizens in social innovation, and the impact of new technologies on existing projects of social innovation involving citizens. Participants will also learn about the relationship between citizen science, social innovation and policy framing, in terms of defining problems, questions and roles of stakeholders, and the role of regulation for the development and implementation of solutions. During the training school, time will be devoted to design socio-technical spaces that involve different stakeholders (e.g., citizens, civil society organizations, scientists, policy makers, and industry) with the aim to enable new solutions that meet social needs. In the design of these spaces, attention will be paid to “putting citizens in the loop”, enhancing public engagement in research and innovation and policy-making, and developing more inclusive and accountable governance of research and innovation.

Outcome(s) of the Training School:
Participants will learn about new forms of collaborative socio-technical development for social innovation, analyze case studies, and apply what they have learned by building a real collaborative socio-technical development for involving citizens and other stakeholders. As a result, participants will learn new skills and, more importantly, they will know new people, peers to collaborate with and/or other professionals who can help their projects.

Program Overview

The program is built upon three main tracks. The first three days will be devoted to introduce participants to these tracks (one track per day). The last two days will be devoted to group work. A detailed schedule is in preparation and will be available at the end of November 2018.

1. Overview of citizen science in research and innovation. This track will explore the following aspects:
   a. Participation of citizens, e.g., RRI and citizen engagement in scientific research.
   b. The relationship between citizen science and social innovation: what is social value, and how do citizens go about creating it? How do we see the role of citizens in the process of social innovation? What are suitable strategies for effective engagement of citizens in social innovation at different administrative levels? Do we need citizen science to foster social innovation?

2. Citizen science, social innovation, and policy-framing. This track will explore the following aspects:
   a. The relationship between citizen science and policy: post-fact world, post-truth politics, and evidence for policy.
   b. Mechanisms to be put in place to move further from knowledge to action.
   c. The policy-framing cycle: differences at administrative levels, geographic scales, informality vs formality.

3. Digital technologies in citizen science and social innovation: opportunities and risks. This track will explore the following aspects:
   a. The relationship between different types of digital technologies and the social innovation outcomes that can be delivered: for example, by examining the focus of the innovation, i.e. is it in digital technology itself? Is it in how this technology interacts with other activities? Is it in how social needs are being met, etc.?
   b. The different combinations of actors, roles and relationships in different types of social innovation, as well as which actors use what types of digital technologies and in which ways.
   c. Inclusiveness: how can we make it possible for a broader cross-section of society to participate? How can we lower the “entry level”?

References

Davies, A., & Simon, J. (2012). Citizen engagement in social innovation – a case study report. A deliverable of the project: “The theoretical, empirical and policy foundations for building social innovation in Europe” (TEPSIE), European Commission – 7th Framework Programme, Brussels: European Commission, DG Research.

Millard, J., & Carpenter, G. (2014). Digital technology in social innovation. A synopsis. A deliverable of the project: “The theoretical, empirical and policy foundations for building social innovation in Europe” (TEPSIE 290771), European Commission – 7th Framework Programme, Brussels: European Commission, DG Research.

Misuraca, G. (2017). Policy making 2.0 & social policy innovation: rebuilding trust in the digital era. [PowerPoint slides]. Retrieved from https://icspconference.files.wordpress.com/2016/12/36_misuraca.pdf