

SHORT TERM SCIENTIFIC MISSION (STSM)

Scientific Report

The Role of Citizen Science in Education - Comparing Research Agendas in the UK and Ireland

Dr. Joseph Roche

Action Number:

CA15212

Grantee Name:

Dr. Joseph Roche

Institution

Trinity College Dublin

STSM Title:

The Role of Citizen Science in Education - Comparing Research
Agendas in the UK and Ireland

STSM start and end date:

04/11/2017 to 12/11/2017

Host

Dr. Jennifer DeWitt

Host Institution:

University College London

STSM Report

Purpose of the STSM

The purpose of this Short Term Scientific Mission (STSM) was to instigate a collaborative partnership between citizen science researchers at Trinity College Dublin and leading Science Capital researchers based in London. This collaboration will promote and advance the COST Action: “CA 15212 Citizen Science to promote creativity, scientific literacy, and innovation throughout Europe”. More specifically, the main aim of this STSM was to combine the expertise of researchers from the institutions working in the fields of informal science education, science communication and public engagement in science to help understand the “synergies” that exist between education and citizen science. The STSM was designed to contribute to Task 1 of Working Group 2 of the COST Action 15212: a “Systematic review of synergies between CS and education”.

Description of the work carried out during the STSM

The STSM involved updating a review of citizen science in education in Ireland as well as coordinating a paper called: “Citizen Science Meets Education and Learning: Converting Tensions into Synergies” for CA15212 Working Group 2. The STSM also involved reviewing the work of Prof. Richard Edwards, Emeritus Professor of Education at The University of Stirling. Prof. Edwards has pioneered efforts to investigate how citizen science can have an impact on the lifelong learning of people outside of the classroom. Prof. Edwards has also explored how the concept of “Science Capital” could be particularly useful for considering the impact that citizen science has on informal learning. Science Capital is a concept that helps to understand the factors that influence people's relationship with science. It is especially powerful for supporting social justice within science education. The STSM provided an opportunity to visit world-leading Science Capital researchers at the Institute of Education at University College London. The institute is the top ranked centre for education in world (2014, 2015, 2016 and 2017 QS World University Rankings). Prof. Louise Archer and Dr. Jennifer DeWitt are the leading Science Capital researchers and this STSM provided a platform to consider citizen science from a science capital perspective, with a view to developing a comprehensive research agenda.

Description of the main results obtained

The STSM contributed to the Scientific Objectives of COST Action CA15212 by exploring the possibilities of citizen science in education. One of the main objectives of CA15212 Working Group 2 is to “develop synergies with education” and “to increase awareness about the possibilities of [citizen science] in education, by collating the knowledge of current practices and underscoring the meaning of [citizen science] in formal and informal education”. Survey research was carried out with a cross-section of primary school teachers in Ireland, post-primary school teachers in Ireland and scientists working in Trinity College Dublin to serve as a benchmark for understanding awareness of citizen science in Irish education systems. Of the primary school teachers (n=50) only three of them (6%) had come across the term “citizen science” before. Among the sample of post-primary school science teachers (n=114) 13% had come across the term. Within the sample of scientists working in Trinity College Dublin (n=157) familiarity with term rose to 53%. However, when participants were invited to define the term, the primary and post-primary school teachers offered definitions that were much closer to the accepted academic definitions of citizen science compared to those offered by some of the participating scientists. This work is being incorporated into an upcoming review of citizen science in education in Ireland. The next phase of this research will be to draw comparisons



with the work that is being undertaken by the Center for Advancement of Informal Science Education (CAISE) in the US.

FUTURE COLLABORATIONS (if applicable)

The work that was undertaken during the STSM will be used to help complete a review of citizen science in education in Ireland as well as the “Citizen Science Meets Education and Learning: Converting Tensions into Synergies” paper being prepared for CA15212 Working Group 2, Task 1. The results of this work will also be disseminated at a number of conferences in 2018: The 15th Public Communication of Science and Technology Conference, 4 th –6 th April in Dunedin, New Zealand; The 2nd International European Citizen Science Association Conference, 3 rd -5 th June in Geneva, Switzerland; and the 29th Annual Ecsite Conference, 7 th -9 th June also in Geneva, Switzerland. The latter conference represents the best opportunity for future collaborations and to build upon the work that was undertaken as part of this STSM as researchers from both Trinity College Dublin and University College London will be participating in the Ecsite Conference in 2018.