

PERFORM: Participatory Engagement with Scientific and Technological Research through Performance

Information for participants

science made simple are working with researchers from the PERFORM consortium on a new research project designed to explore the effectiveness of using performing arts in science education to engage secondary school students in Science Technology, Engineering and Mathematics subjects (STEM).

To achieve this, we will conduct a participatory research process involving secondary school students, teachers and early career researchers in the development of a science education project using performing arts to explore relevant scientific topics at schools. Each interaction with the students will be systematically monitored and assessed throughout the duration of the project so as to include a pre, during and post-performance assessment. This will allow us to identify and analyze any cognitive and behavioral changes towards science and related careers by the boys and girls taking part.

The benefits of participating in the project include getting involved in a unique learning experience where students will have the opportunity to approach scientific issues with artists and scientific researchers. They will also receive training in performing arts and will build valuable transferable skills, desirable for future STEM careers and jobs. Individuals will not be paid for participating in this study, however, expenses will be covered for teachers and early career scientists actively taking part. The schools will also receive the materials required for this project.

This research is funded by the European Commission through a Grant to Isabel Ruiz-Mallén (from University *Universiad Oberta de Catalunya* –UOC, Spain). To conduct the research, this study will use a case study approach based on a total of twelve secondary schools in France, Spain, and UK will be. A total of approximately 600 students will be constantly involved in the research as stakeholders. An additional 6,000 students from 30 to 48 other schools will receive some engagement through this project (i.e., by attending the resultant performances).

Students taking part in this project will be actively involved in a set of workshops designed to encourage collective reflection and dialogue with early career researchers about STEM and relevant scientific topics. The workshops will be recorded in video and audio formats enabling researchers to compare interventions over time and track changes within the group. Students, teachers and early career scientists will also complete a written survey and, eventually, they will be interviewed on their perceptions, attitudes and interest in STEM. The assessment will also include a social media analysis of participants' interaction related to the study in social platforms. Private and personal information will not be obtained during this analysis nor will secretive methods be used to gain access to social media data. PERFORM will be accessing content that audience members choose to make public, either on the performance groups webpages or on Twitter. The data generated in this study will be used for basic science research; it will not be used with any commercial purpose.

All of the procedures chosen for this study are widely used by social researchers and entail no risk to the participants. The Principal Investigator and other participants in the team have considerable experience with using these methods, having used them successfully in numerous social science research projects over the last 10 years. The PERFORM consortium will treat any personal information and data with the highest level of consideration, courtesy, privacy and ethical practice according to the corresponding national legal and ethical requirements.

Informed consent

We are asking for your participation following our invite for your school to work with us on the PERFORM project. Your school does not have to participate if you do not wish so, and you are welcome to decline to proceed at any time. Participation in this study is strictly voluntary. There are no penalties to people who decide not to participate, or who started to participate and later decided to withdraw.

Data from this project will only be available to the project's key personnel. Data are completely confidential. All names will be replaced by coded numbers. Any publications, videos and reports to the funding agency will not identify participants by name. Data will not be used for any purpose other than scientific publications. Data will not be sold, given, or pass in any other way to third parties that might use it with any other purpose than research. Even in this case, we will ensure that third parties cannot identify the person who provided data.

Information will be used to inform scientists and the public in general about the effects of the use of innovative science education methods based on performing arts in fostering young peoples' motivations and engagement with STEM. At the end of the research, we will carry out a workshop at each school to inform about our preliminary research results and ask for feedback. We will invite participants, parents, members of local institutions, and research institutions. A group of students who will be actively engaged in the participatory research will also execute the generated performance-based science education activities in their own school, becoming agents to engage and to motivate other youngsters to approach STEM. We will prepare publications in local languages to disseminate the lessons learned.

Isabel Ruiz-Mallén is the responsible for the project, and you might ask her any questions about the project or the procedures. She will be visiting the schools at least once a year. You can also write to her at the Internet Interdisciplinary Institute, Universitat Oberta de Catalunya, 08860 Castelldefels, Spain. You may also call at 00 34 93 2535743 or send an e-mail to iruiiz.mallen@uoc.edu. If you have questions about your legal rights as a research subject, you may contact: ceeah@uab.cat. To contact her, you can ask one of the project members at the school who will have complete instructions and will do it on your behalf at no cost to you.

You will be given a copy of this form to keep. By agreeing to participate and giving consent, you are not waiving any of your legal rights, claims, or remedies. You will keep the right to withdraw from the project at any moment, without explanations or further

onsequences. You may sign the form yourself or ask for someone else to sign on your behalf. If you prefer we can record your consent to participate by tape recording it.

I have read (or someone has read to me) the information in the consent form. I have had an opportunity to ask questions and all my questions have been answered to my satisfaction. By signing this consent form, I willingly agree to participate in this study.

Name of participant (type or print): Albany Academy

Signature of subject or legal representative [Signature] Date (must be signed prior to entry) 22/01/16

I have explained the research to the participant and answered all of his/her questions. I believe that he/she understands the information described in this consent form and freely consents to participate.

Name of investigator/research team member (type or print): L. Gunn

Signature of investigator/research team member [Signature] Date 30/01/16