

The Art of Science Learning

D6.1

Plan for communication, dissemination and exploitation

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PERFORM Participatory Engagement with Scientific and Technological Research through Performance

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SUMMARY

This document highlights the main features of the PERFORM project and connects them with the general communication strategy that will be used during the project. This deliverable thus corresponds to Task 6.1 "Communication Plan and Tools", led by the European Science Events Association (EUSEA). The communication strategy is structured around the following contents: (a) target groups and the key messages addressed to them, (b) communication tools that will be used to convey these messages, and (c) management structure of the communication strategy. A synopsis of (a) and (b) is also presented, together with a schedule of foreseen actions. The communication strategy presented here combines the specific features of the PERFORM project with the general project communication guidelines provided by the European Commission, creating a coherent approach. As stressed in the following sections, in order to make the communication strategy as effective as possible constant feedback will be collected during the project, which will be used to reshape and focus all the actions planned and to add new actions if needed. The communication strategy is then a set of actions in constant evolution.

1. INTRODUCTION

The PERFORM project is a highly innovative research project, bridging some of the gaps between education, culture and science through an experimental performance-based approach to teaching and research communication practices. It generates and delivers a wide range of qualitative and experimental approaches to science education, with the overall objectives of making science education and scientific careers more attractive to young people and to convey a transparent and critical perspective on science to them, making science more attractive as an empowering and responsible practice. This is done through a series of actions, targeting teachers, early career scientists, students, policymakers, professional science communicators involved in training teachers and researchers, and the science education research community at large.

The communication strategy of the PERFORM project reflects these over-arching objectives and aims to share the knowledge acquired during the development of the project with an extensive community of practitioners and professionals in the field of education and culture. It is for this reason that a robust communication strategy is needed. All the actions described in this document will evolve and be reshaped when needed during the project based on the constant feedback collected both from project partners and other stakeholders. This feedback system will enable the communication strategy to fulfil the complex goals listed, including the engagement of all the target audiences PERFORM will refer to.

In order to reach this goal a set of target audiences have been identified and a range of communication tools both off-line (i.e. conferences, science events, meetings, roundtables, open days, newspaper articles, etc.) and on-line (website, social media, webbased Commission Resources such as Horizon Magazine, etc.) are described in this communication plan, which are chosen coherently with the EU Commission Guidelines for project communication. Levels of pre-understanding, desired results, proposed actions, time and potential partners for the various activities (such as Scientix) are included. The plan covers the data collection output and how the results of the activities will be disseminated and made available (open access) to policy-makers, research and science teachers' communities. Attention will be given to "early adopters" among teachers and how they may be supported.

This document also presents a communication strategy management that

highlights which criteria will be used to adapt and adjust the strategy during the project development. The information flow management is also summarized with the aim of implementing a flexible strategy and a prompt reaction when relevant events and opportunities appear to enhance the visibility of the project. Finally, the plan also covers the use and importance of local languages for certain activities, like teacher communication.

2. TARGET GROUPS AND KEY MESSAGES

Target groups for the PERFORM communication actions are related to the actors actively involved in each phase of the project. These targets have been identified in the design and the early months of the project. Key messages to reach each target group are suggested, which also facilitate the definition of effective tools to convey them. Some key messages will remain the same all along the project whereas others will be refined according to the project evolution. New target audiences can also be identified during the project development, and included in the list with corresponding key messages. Target groups are summarized as follows:

T.1 **Science Teachers** from secondary schools

They are involved in the creation of shows and performances based on research contents. The communication with them will be twofold: (i) they will get information about training toolkits developed during the project, and (ii) they will receive information about scientific contents related to the topics of the performances.

(Key messages to teachers: Discover new training methodologies to teach science and technology; Use performing arts to teach students about STEM; Discover researchers as responsible social actors; Question the issue of responsibility in research practice; Include responsible research features in science teaching; Get informed about cutting edge research; Gain awareness about young people's interests and concerns towards STEM.)

T.2 Researchers (early career researcher and other interested researchers) from all academic areas

PhD students and junior post-docs are the ones actively involved in the project, but other interested researchers in fostering their communication skills in public engagement contexts will be also included in this target group. In this sense, PERFORM project could

provide examples of best practices focusing on performing arts. A second aspect that might be relevant to the researchers' professional life is connected to Responsible Research and Innovation (RRI) in practice. Topics, performances and plots co-developed with secondary school students will be conceived to stress the social role researchers can have. By paying attention to this element, researchers will reflect on how to express what RRI values are.

(*Key messages to researchers*: Develop your soft skills (i.e. ability to engage with an audience, use your body language to enhance your communication skills); Practice communication; Reflect on your social role for a sustainable word; Become a responsible role model for young students; Learn to listen to students' expectations and needs.)

T.3 Performers from the theatre word, street artists

While looking for new inspirational opportunities to develop performances, professionals in performing arts will see PERFORM project both as a training opportunity and as a content provider context. Communication messages should thus address both elements. Being cultural actors involved in many different contexts, performers can be a natural conscious multiplier of STEM-related messages. Their role in triggering the audience's reflection on social issues is a crucial aspect which identifies them as reliable ambassadors of RRI messages and reflections.

(*Key messages to performers*: Broaden your performances repertoire through science and technology; Get inspired by researchers' quest; Meet the researchers to develop creative performances; Develop innovative ways to talk about scientists' social responsibility.)

T4. **Event organizers** in the educational and cultural fields

Institutions such as universities, municipalities, museums, non-profit organizations, small and medium-size enterprises are among the main actors in the organization of cultural events to actively engage citizens with science and technology. These actors always look for new contents and formats to reach this goal, hence the content generated by PERFORM could be of great value for them.

(*Key messages to event organizers*: Discover new performances inspired by science and technology; Engage citizens through the creative mix of performing arts and researchers' future challenges; Learn new methodologies for participatory performance development.)

T5. **Policy makers and stakeholders** in the field of education and culture to be identified during the project development

Innovation in educative methods and cultural processes are some of the main challenges for policy makers responsible for educational and cultural programmes. PERFORM can offer them a set of good examples and practices to be implemented in many contexts such as science education methods based on performing arts, teachers training programmes, and social inclusion activities based on reflexivity involving students, teachers and researchers.

(*Key messages to policy makers and stakeholders*: Discover the cutting edge experiments in science and technology education; Get in touch with some of the best European examples of secondary school didactic instruments; Combine researchers' social responsibility with innovative science education; Shift from STEM to STEAM by linking science education with performing arts.)

3. PARTNER NETWORKS AND INSTITUTIONS IN THE COMMUNICATION PLAN

Scientix and European Schoolnet

Scientix and European Schoolnet hold a particular position in the PERFORM project. PERFORM will shortly become part of the Scientix community. The relationship with Scientix will be developed on a mutual understanding and participation basis, concerning e.g. how PERFORM may contribute to Scientix annual conferences and other possible means of communication. The European Schoolnet is a member of EUSEA, thus already sharing a platform for meetings and communication.

UNESCO (and other international organizations)

UNESCO and EUSEA will co-organise the final conference of the PERFORM project in Paris. This work has to be based on a solid platform of knowledge and expertise, developed during the project, as well as on a mutual understanding and common view on the basic prerequisites, objectives, messages and target groups for the conference. To achieve this, there is a specific need to ensure that the internal and external communication of the project is shared and accessible for all the consortium partners.

4. OFF-LINE TOOLS AND RELATED TARGETS

The following off-line actions are foreseen to be implemented during the development of the project. One or more target audiences are specified using the same code from the previous paragraph (T1 to T5) and are associated with each off-line tool.

Off1) PERFORM graphic identity and communication materials

A logo and a set of graphic elements for the webpage and other printed materials will be designed by EUSEA to be used in different communication events. This set of elements will contribute to define a recognizable graphic identity of the project that might recall a series of concepts such as: creativity in science and technology, performing arts, experiments, researchers' passion for a sustainable society; accessibility; education. An example of these criteria was applied to create the PERFORM logo (Figure 1):



The Art of Science Learning

Figure 1: Logo of the PERFORM project

Coloured ellipses represent spotlights on a stage where performers are protagonists and represented by the fonts inspired by body movements of these actors. The combination of performing arts and the art of teaching is summarized by a possible project motto: "The art of science learning". Despite this sentence might seem too short to summarize the complexity of the project it is conceived using keywords that are crucial for the project rationale: art – science – learning.

(*Target audience/s*: all)

Off2) Memorandum of understandings (MOU) with partners' networks and stakeholders

A series of agreements will be defined with different networks, including Scientix, aiming to make the PERFORM project a key example for different communities dealing with education and culture. The main goal of MOUs is to share with other relevant platforms the knowledge developed within PERFORM. MOUs will focus on concepts such as: open access, innovation in teaching and learning, as well as shared knowledge. MOUs will be jointly generated by EUSEA and the Coordination Team according to needs and opportunities identified during the project. Shared communication actions planned with other networks will reinforce the impact of the project.

(*Target audience/s*: T5)

Off3) Conferences organized by targeted communities

The PERFORM project results will be presented by PERFORM partners during the conferences organized by targeted communities. Presentations can also be delivered by other stakeholders identified and authorized by the PERFORM Steering Committee.

Annual meetings and conferences of networks of science communicators, researchers, and science museums are unique opportunities to share knowledge among practitioners involved in the implementation of new teaching and learning techniques with different audiences. Presenting progress and ongoing results of the project and collecting comments and feedback from practitioners will improve the quality of the project. Participation to the following conferences was already planned by PERFORM partners:

1st HEIRRI Conference: Teaching Responsible Research and Innovation at University (oral communication). March 18, 2016. Barcelona, Spain.

http://www.rri-tools.eu/heirri-conference

PSCT 2016: 14th Public Communication of Science and Technology Conference: The Global Conference on Science Communication (oral communication). April 26-28, 2016. Istambul, Turkey.

http://pcst-2016.org

TEMI Final Congress 2016: 'Teaching the TEMI Way' Congress. April 15-17, 2016 (oral communication). Leiden, The Netherlands.

http://teachingmysteries.eu/en/temi-congress/

EUSEA Annual Conference 2016. May 18-19, 2016 (oral communication). Tartu, Estonia. www.eusea.info

ECSITE Annual Conference 2016. June 9-11, 2016 (oral communication). Graz, Austria.

http://www.ecsite.eu/annual-conference

(Target audience/s: T1, T2, T4 and T5)

Off4) Science Events

Performances produced during the project can be presented in science events around Europe to secondary school students and teachers, as well as to the general public. This will be a form of communication and outreach generated by the PERFORM project aiming at amplifying its impact.

(*Target audience/s*: T3, T4)

Off5) School visits

Activities at schools will be used to communicate project outcomes. PERFORM partners will also disseminate the results of this project in schools not directly involved in the project through communication actions such as open days and other invitations.

(Target audience/s: T1)

Off6) Newspapers and magazines

PERFORM partners will take any possible opportunity to communicate to local and regional newspapers the project's outcomes and results. Press conferences will be organized at local level whenever there is a possibility of announcing a project-related event, e.g.: when a workshop is organized to train researchers a sensible framework will be developed by the local PERFORM partner to give visibility to the project through newspapers.

(Target audience/s: T5)

Other off-line tools will be used according to the needs of the project and coherently with the actions carried on by different partners.

5. ON-LINE TOOLS AND RELATED TARGETS

On1) Website

The PERFORM website (<u>www.perform-research.eu</u>) will be launched in Month 6 (April 2016), organized into a public area and a reserved area accessible to the project consortium members (i.e., intranet).

The structure of the PERFORM webpage should allow users to easily find the information they are looking for depending on the kind of public. The main tabs will be more general, while the tabs containing educational material will be divided by audiences. It will contain material in English, Spanish and French. Provisional sections defined in collaboration with the Coordination Team are (see Figure 2):

1. HOME

It is the main page, containing news about project implementation and events in which the consortium will participate.

2. ABOUT

It includes information about the project, subdivided by:

- Project description: a general overview about the project and its objectives
- Partners description: information about every partner of the Consortium
- Work Packages: description of the different WPs

3. TOOLKITS

It includes all the toolkits, useful documents for implementing PERSEIAs (i.e., performances developed using participatory processes involving researchers, students and teachers). This tab is divided by audiences (see above classification T1 –T5).

4. RESEARCH

It explains the methodology of the PERFORM research and its results, and it should highlight the Open Access of the data. It will contain two sections:

- Deliverables: collection of the deliverables; and
- Progress: working documents about results of workshops and other research activities.

5. EVENTS

It contains the list of events either organized by the project or in which the consortium participates.

6. GALLERY

It contains the links to the YouTube channel and Flicker gallery.

7. CONTACT

It gives the contact of the Coordination Team, who will forward the email to the interested partner in case no answer can be provided by the contact persons listed in the website.

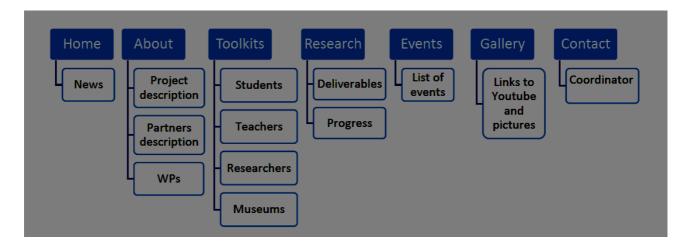


Figure 2. Structure of the PERFORM webpage

On2) Facebook page

A Facebook page will be open in Month 6 (April 2016) and administrated by all consortium members, who will be encouraged to public posts and pictures related to the events celebrated and/or attended during the project. Both public events and internal

activities will be published following the communication plan target groups and messages.

On3) Twitter account

The Twitter account of the PERFORM project will be launched in Month 6 (April 2016) and will be mainly used for public posts during conferences, meetings and training sessions in schools. Posts will be also published during events hosting performances produced during the project. During the project development the possibility to actively involve students and researchers as multipliers of the project visibility on twitter will be addressed.

On4) YouTube channel

A YouTube channel has been launched in Month 3 (January 2016) by EUSEA (channel name: PERFORM Research at:

https://www.youtube.com/channel/UCICTHWOMoYTEZd9XwKJZWpQ) and will be used to post videos and animations related to the project. The YouTube channel will be directly linked to the website. The channel will also host participatory videos produced during workshops in schools and with researchers during training sessions.



Picture 1: snapshot of the PERFORM YouTube channel

On5) Flickr space

Pictures from the project will be collected in specific galleries organized in a Flickr area linked to the website.

On6) European Commission on-line resources

Stories and information collected by the partners during the project development will be proposed for publication to the following web magazines and publications:

Horizon Magazine

http://horizon-magazine.eu/

Project stories

https://ec.europa.eu/programmes/horizon2020/en/newsroom/551/

Commission's Research & Innovation website

www.ec.europa.eu/research/infocentre/all_headlines_en.cfm

An outline of the PERFORM project communication strategy is provided in the following table:

Table 1. Outline of the PERFORM project communication strategy

Communication Strategy Outline					
Target groups		Off-line and on-line tools	Communication objectives	Proposed action towards the target	Time
				Formal presentation during conferences	Starting from first year
				Shows during science events for	As soon as the first shows are
		Conferences	Be aware of RRI tools and	teachers	produced by the
		Science events	impact on the science		project
T1	open days Newspaper and	Introduce new teaching methodologies for STEM	News publication on the website	First year	
			Toolkit available on the website	First documents available on the second year	

		Social media			
				Targeted posts on the social media	Starting from the first year, increasing in the second one
	Science communicators involved in teachers' trainings	Conferences Science events School visits and open days Newspaper and magazine Website Social media	Include methodologies in teacher trainings	Training material, including evidence based knowledge and examples	Second year
	PhD students Early career researchers Science education research community Researchers at large	Research journals Website Social media	Engaged and ready for action, i.e. implementing in their own science communication activities Create interest in developing further research for new data	Making on-going project known through articles (not academic), blogs, at conferences etc.	Preparing during the first year
Т2				Report research results as early as possible, through open access, at conferences, etc.	Dissemination from the second year
				Access to local language material (videos, presentations, etc.), PERFORM Toolkits	Starting in the second year
Т3	Performers and their community	Science and cultural events	Adopt new participatory methodologies to	Inform about the project	Starting during the first year

		Social media Website	develop science shows Include RRI in science shows	Access to toolkits	Second year
Т4	Event organizers	Social media Website	Include PERFORM shows in the cultural programme of the event Encourage the development of more reflective performances including RRI	Inform about the project	First year
	Policy-makers		Make them feel informed and engaged	Policy briefs, evidence-based stories to be disseminated through relevant channels, e.g. Scientix but also through NCPs, national and local Education boards, etc.	Second year
T5	Other stakeholders Science education public administration and entrepreneurs in STEM fields, including industry		Informed and aware, possibly engaged, and preparing for action	Participation in conferences, articles, slide shows, media releases, newsletters, social media	Starting in the first year with constant update

6. COMMUNICATION STRATEGY MANAGEMENT AND INFORMATION FLOW

The communication strategy will be managed by EUSEA through a senior advisor familiar with project's contents and contexts, while actions will be implemented through a specific internal team developed specifically to act as an editorial board of the different communication channels. The senior advisor will be the interface between the Coordination Team and the communication team within EUSEA. The information flow will be developed in two directions: EUSEA \rightarrow \leftarrow PERFORM Coordination Team. On one hand EUSEA will listen to the communication needs coming from the project Coordination Team and will try to develop actions accordingly. On the other hand, the PERFORM Coordination Team will collect advice and reflect on strategies suggested by the EUSEA team. This work will be checked quantitatively and qualitatively during the project duration as follows:

ST1. Periodic check on the quantitative data

Figures from the website -statistics on the use of the webpage- will be reviewed periodically to monitor the visitors' flows and their geographical distribution. Figures from the Twitter account, the Facebook page and the YouTube channel will also be collected. Quantitative data will also refer to off-line tools such as: (a) number of conferences where the project will be presented, (b) number of participants to the conference sessions where the project will be presented, and (c) number of articles appeared on local newspapers and/or television programmes during the project development.

ST2. Periodic check on qualitative data related to the strategy impact

A set of qualitative parameters to assess the communication actions will be implemented jointly with the Coordination Team. At the end of each year feedback about project communication will be collected from project partners through questionnaires, and distributed during international conferences or meetings where the project will be presented.

Adaptation and adjustment of the communication strategy:

Based on ST1 and ST2 generated parameters collected during the project the communication strategy will evolve to strengthen the weak parts and to properly reach all the target audiences.