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WAYS OF VALORIZING THE PUBLIC ENGAGEMENT IN
RESPONSIBLE RESEARCH AND INNOVATION

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Abstract

In the last period, it was noticed a clear trend in the scientific research, which is oriented on the promotion of responsible research and innovation. Thus, we have identified a growing concern in many countries for: conducting research and innovation based on ethical principles, facilitating the public / open access to results of the research, developing connections between research, education and society etc. As such, the public commitment assumed by those research and innovation activities implies researchers who are concerned to promote their work and results to facilitate the understanding and internalizing of the produced results by the societal actors.

In this respect, the paper intends to analyse the public perceptions regarding the ways of its engaging in responsible research and innovation activities. For reaching this purpose, it was designed a questionnaire with ten items, which was administered to a part of the participants in a major event - the *European Researcher's Night* - organized in the last Friday of September, in 2016. The questions targeted to a number of issues such as: ways of public involvement in research, methods to enhance the attractiveness of scientific research to the general public, effectiveness of current methods in order to raise the public engagement in research activities.

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1. Introduction

According to the *European Charter for Researchers (2005)*, the public engagement refers to the fact that researchers should ensure that their research activities are known to society, in such way that are understood by general public (non-specialists), thereby being improved the public understanding of Science.

At the same time, in various European Union bodies, it is foreshadowed the idea that research should be based both on academic integrity and proper social reaction. As such, the researchers' intellectual freedom and the social responsibility represent the core values of scientific research, which must be respected and promoted consistently. Those two values should be mutually supportive, in the scientific research and educational systems, with regard of formal, non-formal and informal educational settings, trying to underline specific contexts of contemporary society.

The researchers, whether they are coming from universities or research institutes, from the economic environment or industry, have to assume moral responsibility for the research and especially for its results. Research and innovation should be responsible in relation to society, the environment and humans. As such, a solid connection should be made at the level of social practices, between the principles of responsible research and innovation: engagement, gender equality, science education, accessibility, ethics, governance and sustainability.

2. Problem Statement

The *public engagement in Responsible Research and Innovation (RRI)* is related to design a future with people and civil organizations, also gathering various societal actors that would not normally connect each other, in the science and technology area (European Commission, 2005). At the same time, there are several benefits that public engagement brings onward, as they are proposed to be implemented in Horizon 2020 programme (European Commission, 2016):

- contributes to *constructing* of a *more scientifically literate society* which is able to participate actively in / and support democratic processes, and science and technology developments;
- infuse differing *perspectives* and *creativity* in research design and results;
- grants to fostering more societally *relevant* and *desirable research and innovation outcomes* to help us tackle societal challenges.

Public engagement implies a *dialogue* between researchers, policy makers, industry and civil society organisations, NGOs, and citizens, it fosters *mutual understanding* and *co-create research and innovation* outcomes and policy agendas effective in tackling societal challenges, and fosters also wider acceptability of results.

3. Research Questions

Taking into account the importance that public engagement has for a transparency research and innovation process in the actual society, it is normal to raise questions that target to a number of specific *issues* such as:

- what are the proper ways to involve the public in research activities?

- what are the suitable methods to enhance the attractiveness of scientific research to the general public?
- what are the effectiveness of current methods in order to raise the public engagement in research activities?

4. Purpose of the Study

Having in mind the above-mentioned questions, it is important to see and evaluate the *public perception regarding the ways of its engaging in responsible research and innovation activities*.

Taking into account that public engagement in research and innovation activities is expressed especially in the foreknowledge of Horizon 2020 programme - a European programme dedicated mainly to researchers -, not so many citizens are familiarized with the concept and its specificity. In this respect, it can be said that this study represents a real starting point on understanding the dimensions of responsible research and innovation by general public.

5. Research Methods

For reaching the purpose, it was designed a questionnaire with ten items, which was administered to a part of the participants in a major event - the *European Researcher's Night* - organized on the 30th of September 2016. Stated in the frame of the FP7 IRRESISTIBLE Project, where the set-up national *Community of Learners* developed and implemented training modules related to cutting-edge scientific themes, by integrating also *RRI dimensions* (Anghel, Gorghiu, & Măntescu, 2016; Petrescu, Gorghiu, & Gorghiu, 2016), the event gathered interactive exhibits, posters, experiments and demonstrations, trying so to let the students communicate scientific content and RRI issues to large public. 100 participants expressed their feed-back related to the public engagement in responsible research and innovation. The data was collected and processed with statistic software.

6. Findings

When they were questioned about how they perceive the idea of involving the public in research activities, the respondents stated a rate of 6% that is a *very good* idea, 22% that it is a *good* idea, 66% that is a *reasonable* idea, and 6% that is *not a good* idea. Those results lead us to the fact that most of those surveyed are aware of the necessity of such activities, reflecting the needed of a greater openness of research to society, and to general public in particular. Also, the fact that 6% of the respondents claimed that this involvement would not be auspicious, make us consider the fact that some members of the actual society are still reluctant or cautious on such activities.

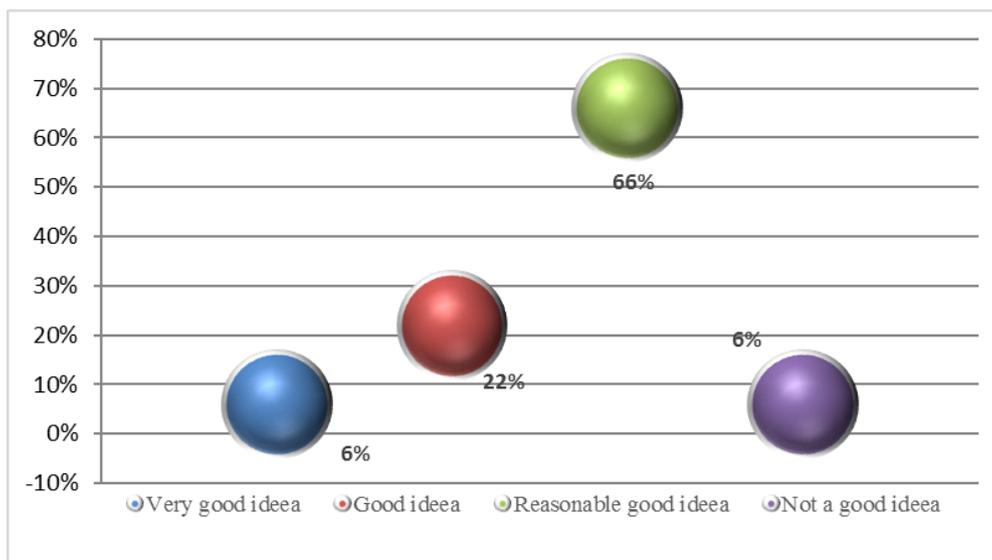


Figure 01. Participants' feedback related to the idea of involving citizens / general public in research activities

Regarding the methods by which we can engage citizens in research activities, 33% of them said it has connections with the learning / teaching methods, 62% believe that the most effective are the media campaigns, and the remaining 6% give importance to other methods such as: scientific conferences, workshops, exhibitions, visits to research institutions etc. Practically, the basic idea that emerges from here, given the tremendous difference between the first two answers, is that education should intensify their efforts and step up their actions to promote the involvement of the general public (students, teachers, school managers, parents, other societal actors) in research activities.

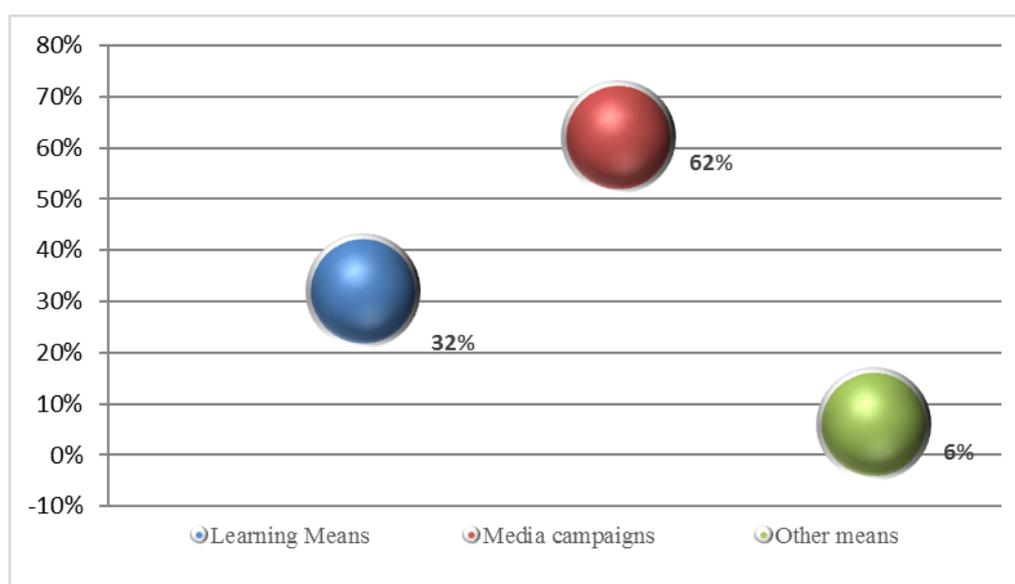


Figure 02. Participants' feedback related to the best method to engage citizens in research activities.

Regarding the extent that current methods of public engagement are effective, 26% of respondents believe that they are *quite* effective, 42% think they are *medium* effective, and 32% replied that the methods used so far *are not* so effective. We have to note that the answers are somewhere at the medium

assessment scale, because no respondent said that the methods used so far are very effective or ineffective. This leads us to consider that is felt at the social and community levels, the need to improve and diverse the methods related to how public engagement is involved in research and innovation activities.

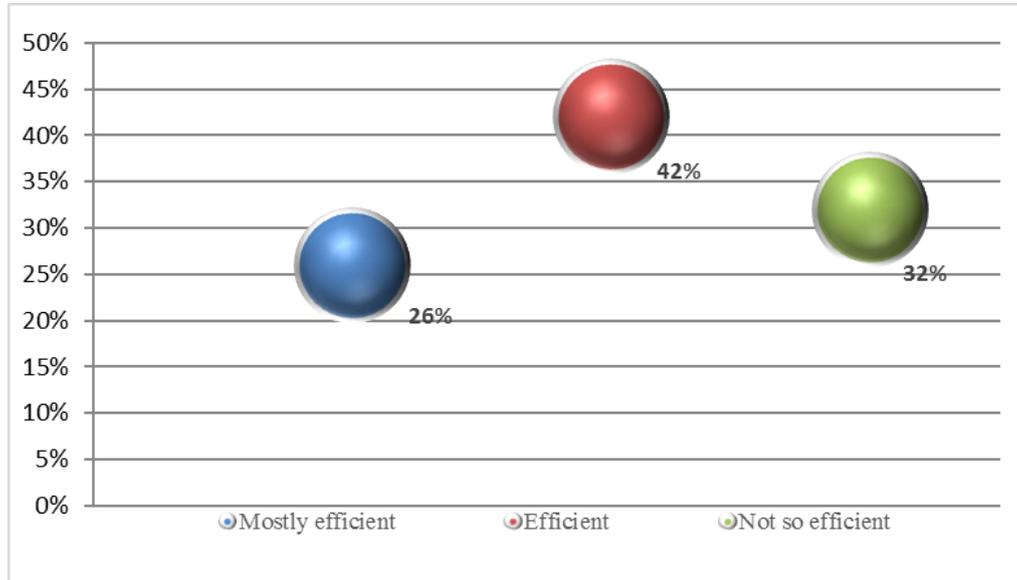


Figure 03. Participants' feedback related to the efficiency of the actual public engagement methods.

On the need to encourage the young people to embrace a career in research, 14% believe that it would be *very appropriate*, 64%, are *largely agree* with this idea, 12% oscillates between a *positive response and negative one*, and 8% believe that this *would not be so necessary*. The fact that most responses tip the balance towards the idea to the need to encourage young people to embrace a research career, entitles us to say that future generations will grant research activities and its products, by increasing their attention, among other things, to develop the public engagement in research and innovation activities, at the level of current social practice.

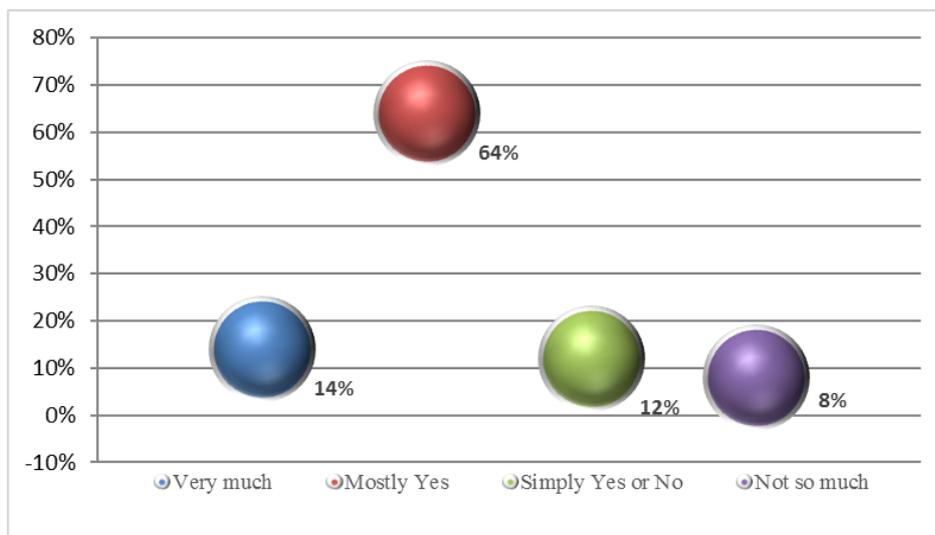


Figure 04. Participants' feedback related to the to the involvement of future generations in research careers.

7. Conclusion

The obtained results allow us to affirm that we are witnessing *a process of upgrading the scientific research activities to the general public*, due to the policies and contemporary practices of scientific research, designed to *bring science closer to everyday life and to the people*, in general.

In this context, the promotion of the public engagement in relation to responsible research and innovation activities will substantially increase the public involvement in research activities and become a current social practice, absolutely necessary for the progress of humanity, science, technology and society as a whole.

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