

Vetenskap & Allmänhet's, VA (Public & Science) views on research and innovation

Interaction between science and society is important for many different reasons: citizens have a democratic right to have access to research results and findings; individuals; organisations and elected representatives need to be able to make decisions based on scientific evidence; to gain the acceptance, understanding and support of society to invest public funds in research; to inspire new generations to pursue higher education and research; to enable the perspectives of users and affected groups to be taken into account in research; and to help researchers and innovators gain new ideas and insights.

The non-profit association VA (Public & Science) works to promote dialogue and openness between researchers and the public. The association has some 80 member organisations from different sectors of society and its remit includes carrying out studies, developing meeting formats, communication, and advocacy work. Below are a number of proposals for how we believe higher education, research and innovation can be more closely linked to societal needs and challenges through closer collaboration and dialogue with citizens and other stakeholders.

Suggestions to help promote dialogue and openness between science and society

Good role models, incentives and culture change

Projects to develop a system to evaluate and reward science-society interaction have been initiated by the Swedish government. The Swedish Research Council and the Swedish innovation agency VINNOVA have been tasked with recommending how resources could be allocated to reward the quality of research, as well as investigate whether it is possible to measure the quality of interaction. At an individual institutional level, we believe that universities need to introduce clear incentives and reward systems that include public engagement and science communication.

Stakeholders involved in research should also be encouraged to demonstrate their commitment to public engagement. Good examples from the UK include the *Concordat for Engaging the Public with Research*¹ signed by research funding bodies and the *Manifesto for Public Engagement*² for universities and research institutes. In addition, there is a database of public engagement case studies published by the HEFCE³ as well as expertise provided by the National Coordination Centre for Public Engagement.⁴

A national strategy and a broader definition of science-society interaction

In order to facilitate and strengthen interaction and dialogue between researchers and other societal actors, a national strategy for science communication should be developed. VA also wants to see a broader definition of science-society interaction in the Higher Education Act to better describe its diverse nature and reflect the mutual benefits. We propose that it should be rewritten to read: *The role of universities and individual researchers should include engaging with their surrounding society. Science-society interaction is an integral part of the work of the institution and involves dialogue and collaboration for mutual exchange and benefit. The surrounding society includes stakeholders in the public sector, business and civil society, as well as the general public.*

Responsible research and innovation and citizen science

In order to develop products, services and processes that are useful, sustainable and ethically acceptable, interaction between science/innovation and society needs to be strengthened. Responsible Research and Innovation, RRI, is a generic term for this and is featured in many of the calls for proposals within the

¹ <http://www.rcuk.ac.uk/pe/Concordat/>

² <http://www.publicengagement.ac.uk/support-it/manifesto-public-engagement> ³ <http://www.ref.ac.uk/>

⁴ <http://www.publicengagement.ac.uk/>

EU's research programme, Horizon 2020. VA is working to develop the approach and support conditions for RRI in Sweden and acting as the Swedish hub in the EU Project RRI Tools.⁵

It is also becoming increasingly common to directly engage different stakeholders in the research and innovation process. *Citizen science* is a rapidly growing international movement that is of benefit to research projects that involve collecting large amounts of data. The result is better products and services that meet the needs of users, while at the same time increasing the public's interest in and understanding of science.

Attitudes to higher education and research

VA has historical data from its annual opinion surveys into the Swedish public's attitudes from 2002.⁶ Peoples' views on education, science and researchers have a major impact on their motivation to study, access research-based knowledge and invest money into research. Generally, trust in research, scientists and universities is high and fairly stable in Sweden.

Trust is founded and built upon transparency, discussion and openness. A long-term and on-going approach is required in order to influence attitudes. One example is the EU initiative European Researchers' Night, known as ForskarFredag in Sweden, a science festival where the general public and school pupils are invited to meet researchers and discover how research affects our everyday lives. The event, coordinated by VA, will take place this year on 30 September in around 30 cities, from Luleå in the north to Malmö in the south, and is organised by universities, local authorities, regions, science centres and museums.

Research into science-society interaction

Sweden is a country with strong and broad engagement between academia and the surrounding society, but there has been little research into the interface between science and society. In other countries, special programmes exist, such as *Science & the Public* run by the German Science Foundation. Similar research programmes should be set up in Sweden.

Mandatory science communication course for PhD students

In order to be able to interact and engage in dialogue with society, researchers need courses, support and training in science communication. We propose that a short course in public engagement and science communication is introduced as a mandatory part of all postgraduate science degrees in Sweden.

Reporting requirements for researchers and funding bodies

In the research grant application process, applicants should be asked to specify how they will communicate the results of their research, how they plan to make the data openly available, and how they will publish their research. These aspects should be included in the assessment criteria and the outcome of the activities evaluated once the project is completed. Requirements could also be introduced for research funding bodies to report on the steps they are taking to promote science-society interaction and science communication in their calls, evaluation work and follow-up processes.

Combined employment positions between academia and other sectors

There are several good examples of how science-society interaction and mobility between sectors can be promoted through the way employment contracts are drawn up. One such example is the combined employment contracts that mainly doctors and dentists have, making them partly employed by a university and partly by a private practice. Such forms of employment should be promoted in other sectors.⁷

Involving citizens in decision-making

To tackle the societal challenges both research and research-based knowledge must be put into practice. This requires a willingness to change and commitment from the general public. A number of ways to involve citizens in decision-making processes have been trialled internationally, such as citizens' dialogues. These types of consultations should be tried prior to important decisions relating to research and innovation.

⁵ www.rri-tools.eu

⁶ <http://v-a.se/english-portal/projects/study-projects/the-public/>

⁷ Umeå University is currently trialling combined employment contracts for teachers.