

# Is engaging with the public optional?



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Public engagement with science and technology is increasingly being viewed as a vitally important activity for practicing scientists and researchers. Nevertheless, it is still regarded by many within the scientific community as either an optional extra or a waste of valuable time that could be better spent pursuing research goals. This is despite strong statements from governments, learned societies, and research-funding organizations about the importance of dialogue with the public.

In 2000, the UK House of Lords Select Committee on Science and Technology identified a crisis of public trust in science and concluded that “direct dialogue with the public should move from being an optional add-on to science-based policy making and to the activities of research organizations and learned institutions, and should become a normal and integral part of the process.”

It is clear that the establishment of public trust and confidence is of critical importance, if science is to continue to receive support. Dialogue with the public helps to ensure accountability (i.e. how public taxes are being spent), demonstrates transparent and ethical working practices, and has the potential to contribute to effective policy development. Indeed, public participation in decision-making is becoming increasingly common within all levels of government, and we should not expect science policy to be an exception.

A second crucial area is in securing the long-term future of science in society. In the US and the European Union, fewer young people are choosing to study science and this, of course, has potentially serious consequences for societies and economies that are reliant on science and technology. A key role for public engagement is to encourage and

inspire the young people who will be tomorrow’s scientists. It is also important to build a community of voters who have a better understanding of risk and are equipped to make informed decisions.

The following extract from the Science and Innovation Strategy for Scotland summarizes very succinctly the role of science in society: “With science issues and innovation increasingly playing a part in every person’s life, it is becoming ever more important that citizens are able to make informed and responsible choices, whether as consumers, as parents influencing a child’s career direction, as voters, or as ‘users’ of the natural environment. Further, in a ‘science nation’, science should be an overt part of our culture like our literature, music, etc. – a source of enjoyment, excitement, and pride.”

The reasons I have presented in favor of public engagement focus on the benefits to society, but compelling reasons stem from the benefits to individual scientists who choose to engage with the public. For graduate students, public engagement provides excellent opportunities to develop communication skills, self-confidence, and a contextual awareness of their subject. At the same time, these students are also superb role models for young people and do much to dispel the stereotypical images of scientists. For more experienced researchers, the benefits are equally tangible. Interaction with people who are genuinely curious presents the scientist with not only the intellectual challenge of explaining unfamiliar concepts and relating them to everyday life, but also provides the opportunity to view their work from someone else’s perspective.

The skills developed through engaging with the public are often directly transferable to teaching in

a more traditional academic environment and can significantly enhance the effectiveness of teaching. These skills can also enhance research activities, particularly through the communication of ideas and concepts to wider audiences, e.g. in the preparation of funding applications and through interactions with academic and industrial collaborators. Indeed, promoting research to the wider public can often be a very effective method of attracting the interest of industry – an interest that sometimes arises from an unexpected or unfamiliar sector – hence leading to additional opportunities for funding.

Perhaps one of the most interesting developments in public engagement is the active participation of the public in the research process. This is exemplified by projects such as Stardust@Home – an interactive internet-based search for interstellar dust collected by the Stardust spacecraft during its encounter with a comet. In this project, thousands of volunteers are tasked with identifying microscopic interstellar dust particles from video images that are distributed via the internet. The participants not only learn about astronomy, but also contribute to a major research effort, thereby reducing the length of the project from years to months. This type of collaborative effort may well become more common, particularly for research projects where large amounts of data require analysis by human input rather than by computer.

I firmly believe that dialogue with the public will continue to grow in importance, not only because of pressure from governments and funding bodies, but also through a realization of the benefits that it brings to society, educational institutions, and individual scientists. Perhaps most important of all though is the fact that it’s fun! So go on, get engaged!