Knowledge dissemination

Scientists have much to gain by sharing their research with the public

For most scientists sharing research with the public is a road strewn with thorns that they would rather avoid. But it does have its advantages, writes Marina Joubert.

Academic life is a juggling act. It involves research, teaching, applying for grants, writing scientific articles and peer reviewing others' work. There's also student supervision and administration.

These days, academics face an extra demand: to make their work more visible and accessible to the public and policymakers. But what's in it for these time-stressed, busy scientists?

"Science can be very lonely," admits distinguished Swedish astrophysicist, Bengt Gustafsson. We were chatting after he'd delivered a talk at Stellenbosch University and I asked what motivated him to make time for public engagement. He replied: "Occasions like these where I can share my work with people, especially children, keep me going. It gives meaning to my work and even sparks new ideas for my research."

Gustafsson's attitude is echoed in a report from the ***UK: What's in it for me? The benefits of public engagement for researchers.*** It emphasises how public engagement can open up fresh perspectives on research and encourage more people to embark on scientific careers.

But these intrinsic rewards aren't enough to convince many researchers that public engagement is worth their while. Luckily the evidence is mounting to show them how it can be done and why it's time very well spent.

Professional rewards

Scientific articles in accredited journals, book chapters, whole books and monographs all add to a research's professional reputation. These achievements count towards promotions. In South Africa, they also bring significant financial reward from the Department of Higher Education and Training.

But where are the rewards for writing a popular article, doing a radio interview, speaking at a science café, or tweeting about your research findings?

Science communicator, Matt Shipman, has offered some answers to this question. He argues public communication helps scientists to attract top students, impress their funders, network with other researchers, form new collaborations and draw interest from industry and government.

His stance is bolstered by peer-reviewed evidence. A group of US social scientists has demonstrated a link between "h-index" – a measure of the quality and influence of a researcher's work – and whether the researchers in question interacted with journalists and were mentioned on Twitter.

"Doing both – traditional media and social media – is more powerful in boosting citations than doing just one of the two," Dominique Brossard, University of Wisconsin-Madison professor of life sciences communication, told me. She took part in the research project.

"Instead of thinking of time spent on social media as a distraction, researchers should see it as a way of making their work more accessible to broad audiences."

Conrad Matthee, an evolutionary genetics researcher at Stellenbosch University, has seen for himself how media visibility can boost reach within the scientific community.

He was the corresponding author of a recent research paper that estimated white shark numbers along the South African coast based on dorsal fin photos and genetic data. The research was featured on global media channels, including CNN and the BBC. The number of downloads of the original paper skyrocketed.

"This proves that getting media exposure for research is a sure-fire way of getting other scientists to take note of your work," he said during an interview with me.

Universities also crave publicity for their academics' work. "Our research needs to be visible. This is absolutely critical for ensuring sponsorship and sustaining support from government and industry partners," says Therina Theron, research director at Stellenbosch University.

If professional rewards aren't enough to convince researchers about public engagement, there are other factors to consider.

What about the moral imperative?

Researchers have privileged access to new evidence that can underpin informed decision-making. It is often argued that scientists have a duty and even a moral obligation to be heard in public debates and to influence public policy. If scientists keep quiet, these public debates may be dominated by people with questionable credibility and doubtful agendas.

Andrew Wright, an environmental scientist at George Mason University, has called advocacy "an almost inescapable part of modern science". He argues that scientists have a societal obligation to deliver credible information to those who can use it. Failing to do so, he suggests, leaves scientists at risk of becoming irrelevant.

Accountability is another principle reason for researchers to share their work with the public. After all, the bulk of research in public universities and science councils is funded by taxpayers. Scientists have a responsibility to tell the public what they are doing with its money.

David Eagleman, the director of Texas' Baylor College of Medicine's Initiative on Neuroscience and Law, has written a manifesto, Why Public Dissemination of Science Matters. In it, he stresses scientists' responsibility to inspire critical thinking. He also says that although most scientists may not be specifically trained to communicate to the public, they have what it takes.

"You have been trained to think with rigor, to integrate large bodies of data, to weigh evidence, to value intellectual humility, to retain nuance when speaking about complex issues, and to write precisely what you mean to say. So speak up. The future needs your voice."

Getting started

Scientists who are up for the challenge will find that there are many spaces in which to start sharing their research with the public. These include:

Researchers can use social media throughout the research cycle to bolster collaboration and make new findings available to broad audiences, including science journalists.

Videos drive traffic and shares on social media, so platforms such as YouTube and Vimeo cannot be ignored.

Planning communication into research, and making it part of one's research identity, will not necessarily deliver overnight fame and fortune. But it has the potential to connect scientists to new audiences and add value, meaning, reach and impact to their work. It is a way to see how their science makes a difference to real people.

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Eight rules when communicating through social media

- Don't just talk at people – aim to actively engage with them.
- Ask questions to encourage interaction and discussion.
- Interact with other pages/people (comment, share, retweet).
- Respond politely and respectfully to comments. Sometimes it is best to just ignore.
- Maintain your professionalism. Don't let your emotions rule when posting or responding to comments.
- Use spell check – it only takes a minutes.
- Be consistent – check your site regularly and build a cohesive social media presence.
- Don't post sensitive or confidential information – if in doubt, leave it out.

Source: www.sciencemediasavvy.org