

Science communication training may need to be more focused on strategy

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What we wanted to study ...

We used interviews to better understand how science communication trainers think about communication objectives and goals.

Underlying the focus was a question about the degree to which science communication training focuses on building journalism-type skills versus the strategic selection of specific communication objectives (e.g., changes in trust or how people frame issues) that communication research suggests might help achieve scientists' long-term communication goals (e.g., support for policy).

The study focused on science communication training because such training is a central way that the insights of communication research are made available to scientists serving as communicators. Such training does not appear to have been the focus of substantial past research (see, however: Miller, Fahy, & The ESConet Team, 2009).

The research comes out of collaboration with the training community and a desire to better connect research with training.

What we did ...

The research team used snowball sampling coupled with targeted Internet searches to compile a list of people involved in science communication training in the United States and Canada. Twenty-four phone interviews were completed during the fall of 2014.

The interview protocol initially asked trainers what types of goals they thought scientists had for their communication efforts and then asked about the degree to which the training they provided emphasized skills versus specific goals or objectives. Respondents were then queried about a subset of potential communication objectives.

Trainers were asked both whether these objectives were discussed in their training and the degree to which they felt that scientists were comfortable with these objectives. These objectives were selected based on their prominence in the science communication effects literature. All the interviews were transcribed. The researchers coded and analyzed the data qualitatively.

What we found ...

The interviews suggested that communication trainers believe that the scientists they work with have a range of long-term goals and that the training they provide emphasizes communication skill development. Training focused on helping scientists prioritize objectives and strategize how these objectives might be achieved does not appear to be the focus of substantial training. Nevertheless,



Photo: AAAS training at MSU, February 2015

it is also clear that many of the skills that trainers emphasize might result in achieving a range of communication objectives, even if the connections are not made explicit during training.

Origin of Scientists' Communication Goals. The trainers interviewed almost all indicated that they encouraged scientists to SET THEIR OWN GOALS. Often, there was a recognition that the goals scientists' might have would change depending on the audience they had access to and what that audience might be hoping to get from interacting with a scientist.

Scientists' Long-term Goals for Communicating. Respondents' appear to split motivations for scientist communication into PERSONAL and SOCIETAL goals. PERSONAL goals appear to include issues related to a scientist's desire to realize PERSONAL BENEFITS and pursue larger SOCIETAL BENEFITS as part of her/his career.

There were also several responses suggesting that trainers appeared to believe scientists sign up for training simply out of a desire to BE BETTER at communicating. For SOCIETAL factors, the central goals appear to be desire for government decision-makers to make policy decisions that are consistent with scientific evidence.

At the most general level, this was about ensuring recognition for the GENERAL VALUE OF SCIENCE and the attendant need to fund science, although a number of respondents also emphasized the importance of recognizing the SPECIFIC VALUE OF SCIENCE in providing policy guidance on issues in areas such as environmental protection.

Other SOCIETAL factors mentioned included either a desire to communicate out of a SENSE OF DUTY to the society that funded the research, or recognition of the potential value of serving as a ROLE MODEL.

Views about communication objectives. While trainers said scientists have a range of overarching long-term goals for communication, an additional set of questions attempted to get at what the various training programs did to try to help scientists achieve those goals. Specifically, an effort was made to get the interviewees to indicate the degree to which their training emphasized specific intermediate, communication-oriented objectives that that scientists might seek to achieve in order to realize the long-term goals described above.

As might be expected, there was unanimity that scientists could, should, and would seek to *INCREASE KNOWLEDGE* through science communication. It was also clear that many trainers believed that scientists' logic was that by increasing knowledge, scientists could improve society. Further, several trainers argued that this was the most comfortable role for scientists inasmuch as scientists all "came through grad schools ... so they know what it is to be in the role of an educator.

The *INCREASE KNOWLEDGE* objective often manifested itself in the emphasis on ensuring clear, jargon free communication or in the emphasis on helping scientists select key pieces of information that they felt laypersons need to know.

The trainers interviewed had mixed views about the degree to which the scientists they train would want them to prioritize *FOSTERING EXCITEMENT*, including increasing interest in science, as a communication goal. Few of the trainers indicated that fostering excitement about science was an explicit objective of what they were training scientists to do.

Trainers were also somewhat mixed on the degree to which they felt that the scientists they train would be comfortable with making *BUILDING TRUST* an explicit objective of communication. Further, few trainers said that trust building was an issue that the trainers said they emphasize when working with scientists. Trust, in this regard, might include efforts to ensure that scientists are seen as warm and competent (Fiske & Dupree, 2014), and include things such as making personal connections, demonstrating respect or caring, and highlighting transparency efforts. There was some concern that scientists might feel that actively trying to get someone to trust them might feel 'too much' like persuasion.

On the *COMPETENCE* side, the emphasis was simply on ensuring accuracy and being careful to substantiate assertions, and being transparent (Interview 5). When asked explicitly about demonstrating competence, the trainers generally indicated that scientists would be fine with tactics to establish their expertise. It was not something, however, that appeared to be integral to training efforts. As with *EXCITEMENT*, a challenge seemed to be that many trainers appeared to see trust building as an

additional mechanism for getting respondents to pay attention to scientists' factual information. There was only limited sense that building trust might lead to achieving scientists' long-term communication goals.

Many trainers said that most scientists were likely to see value with the goal of *FRAMING ISSUES* so that they resonate with audiences, however several trainers also expressed potential concerns with this goal. Framing in this context should be understood as the interpretive story line running through a communication that suggests a specific way of thinking about why an issue might be problem, who might be responsible, and what should be done (Nisbet, 2015).

Many trainers said that most scientists come to recognize why thoughtful framing of issues is so important once they come to understand the concept.

What it all means.

The current research suggests that trainers might benefit from support that helps them provide training that starts with overall, long-term goals but then identifies the intermediate objectives that might allow them to achieve these goals.

Doing so could help prioritize training on skills that help achieve specific objectives and, thus, potentially, goals. A focus on the range of potential pathways between specific communicative acts, communication objectives, and long-term goals might help scientists see the strategic value of ensuring that communication does more than simply educate and that ensuring trust in science and specific issue framing can also achieve the goals that scientists appear to see as important.

In many ways such training would represent an effort to shift training away from a journalism-oriented form of training toward a strategic communication-oriented form of training.

The main difference is that, whereas journalism training focuses on skills aimed at telling compelling public-interest stories, strategic communication training builds on the fact that science communicators have specific goals in mind when they communicate and thus would benefit from strategic planning aimed at helping them identify objectives that would allow them to achieve those goals.

Sources

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