

# Information Is Not Communication!

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It doesn't seem to matter whether I am working with undergraduate students, graduate students, early career scientists, or long-serving administrators—

scientists across the board seem to confuse the words “information” and “communication.”

The journalist **Sydney J. Harris** actually clarifies this distinction better than anyone: “Information is giving out; communication is getting through.”

When phrased so succinctly, the difference seems quite obvious. And yet, the problem persists: How do we, as scientists, “get through” to our audience? As scientists, we continue to provide information (e.g., “GMOs are safe; vaccines do not cause autism; managing plant disease is important”), followed up with more information,<sup>1</sup> and don't understand why our ideas haven't been accepted. How much data (information) do these people need?

Stop. To quote a classic, “Begin with the end in mind.” Who are you trying to communicate with? Clarify who your audience is—the writing for a grant panel will change depending upon the focus of the RFP; an audience of scientists is different from an audience of master gardeners, which is different from an audience of farmers. You are communicating for the audience—this isn't about you, and clear for you is not necessarily clear enough for your audience! This is particularly important when writing for publication, or a grant proposal, or trying to use data to inform decision making. The best way to persuade someone to your point of view is by helping them to understand and also by developing your own understanding of their point of view. We live in a multicultural society. This makes arriving at understanding a complicated proposition! We may talk to each other, and even use identical vocabulary, but we quickly learn that our words don't necessarily mean the same things.

After you've determined whom you are communicating with, you need to determine *what* you are trying to communicate. More importantly, how is it important to *them*? It doesn't matter how clear you are if your audience or reader doesn't care. How do you make them care? A very good place to start is with explaining why it is important to your audience. And although it is tempting

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to talk about the genetic plasticity of the genus *Phytophthora*, most people (other than other scientists) simply want to know how to protect their plants. Any interest you wish to share about *Phytophthora* may be more successfully communicated by focusing on plant protection.

Once you have clarified the “why,” you can move on to communication. When trying to communicate, especially something complex, make sure what you are trying to say is clear to the reader/audience from the beginning. Review what you are trying to communicate, evaluate how you did, edit. There are degrees to understanding (it's not always just a black-and-white proposition) and you can always improve your own understanding of a topic. You may need to repeat this process, but you should not be repeating your words. Try to explain with less, especially if it is complicated. Providing additional information is not going to suddenly transport the reader/audience to understanding.

Most importantly, remember that you are trying to create a connection. As scientists, we want to give the audience *all* the information, with perfect accuracy. In fact, this is where giving the audience just enough info to be

useful<sup>1</sup> may be a better strategy. Data and information aren't inherently helpful and are rarely persuasive. It's the context and connections to who and why that make them so. Beginning with the end (your goal) often has this paradoxical way of bringing you back to the beginning (who am I communicating with).

So, how do you clarify and develop understanding in 700 words or less? There are no secrets or shortcuts—it takes time, patience, thought, and practice. There are a number of helpful books on the topic<sup>2</sup>. Communication is hard work. It forces you to challenge yourself about what you think you know and your assumptions about information. But in the end, there is no more powerful persuasion than causing people to understand something that is important—to them. ■

<sup>1</sup> Explanatory footnotes provide material that is related to the topic but is not necessary for inclusion. Its use here is ironic.

<sup>2</sup> Two excellent books on writing include *Style: Toward Clarity and Grace* by **Joseph Williams** and *Scientific Writing—Thinking in Words* by **David Lindsey**. For presentations, *Even a Geek Can Speak* by **Joey Asher** provides excellent advice on how to formulate presentations.