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Communication Skills for Researchers: Don't Settle for Status Quo

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"Example is the school of mankind," said the British statesman and philosopher Edmund Burke. However, for researchers who want to learn communication skills, example is perhaps the worst school. What are the alternatives?

When I start a training program for doctoral students, I typically ask the 25 participants to introduce themselves in turn by stating their names, saying "something about their research" (a deliberately vague request), and clarifying what they expect from the program. After they have all done so, I ask them what fraction of the 25 blurbs about research they actually understood. Since they are all from the same school, you might expect this number to approach 100 percent. In practice, however, it is seldom higher than 50 percent and often as low as 20 percent.

Then I ask them how many of the research topics thus presented they found interesting—how many times they said to themselves "hey, this sounds cool" or perhaps "wow, I wish I could work on *that* for my Ph.D." At best, the answer is ... one. Conclusion: When Ph.D. students

talk about their research, half of the time even their peers do not understand—and when they do, they find it boring.

My observation would not be so alarming if it were limited to the classroom. Alas, the story holds for conferences as well. When I ask researchers to

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evaluate, out of the presentations they attended at a recent conference, what fraction they actually found useful, the answer varies between 10 and 25 percent.

And when I inquire about how many of these presentations held their attention from start to finish, the typical answer is, again, perhaps one. Considering the high cost of attending a conference—in terms of registration, flights, accommodations but also of time invested—one could hope for a better return.

Sadly, the disappointing quality of most conference presentations negatively affects the learning process of the budding researchers attending them. These young people logically regard current practice as the norm and consequently strive to emulate it in their attempt to fit in. When they do not understand a presentation, they are prompt to assume that the fault is theirs: Surely, everyone else understands, while they simply lack the background or the brains—a you-will-understand-when-you-get-older kind of rationalization.

When they are to give their first conference presentation, they try hard—consciously or not—to be as dull, dry and dreary as their peers have been. The same applies, of course, to journal articles, with young authors writing, for example, overly self-centered abstracts just because they have been exposed to so many of them.

Such peer pressure runs deep. When we discuss ways to make a presentation or paper more audience-friendly, it is not uncommon for training participants to exclaim “yeah, that’s a great idea,” only to add “of course, you can’t do that at a conference” (or “for a journal”). When I ask them why, they respond: “Well, you know, in those cases, you are supposed to ... er ... you know ...”—and words fail them. Still, they feel they must conform.

Paradoxically, there is usually no doubt in the mind of more senior scientists, engineers and other professionals that effective communication skills are a critical success factor for any career. After all, papers and presentations are the primary (if not the only) tangible outcome of a researcher’s work.

Moreover, the time when an introverted scientist could happily hide in his or her lab with guaranteed funding for several decades is long gone. Nowadays, researchers spend a large share of their work time fighting for funding, managing people or departments, reaching out to society, and interacting with policymakers. Add global mobility to the equation and you understand how survival-critical it is to get the attention of an audience, to get messages across to them, and eventually to prompt them to action—possibly in what is not your native language or native culture.

The good news is, you *can* learn to communicate better at any point of your career path.

If you are a young researcher, by all means sharpen your communication skills. Look for opportunities to enroll in a training program—not (or not just) one focused on language, but one



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that discusses strategy and structure. Learn what to include—and what not to include—in an oral presentation or journal article, and in what order to include it (and why). Learn how to design an effective graph or slide.

Do you hate speaking in front of an audience? Then grab every unimportant opportunity to do it: group meetings, student events, birthday parties and so on. We all learn by mistakes; if you avoid speaking in public until your first big meeting presentation, you will make all of your beginner’s mistakes when the stakes are highest. Similarly, avoid postponing the writing you have to do. Start early. For example, write the introduction to your paper or thesis well before you finish the research. Foresee time for iterations, too: Much of the learning stems from feedback and revisions.

If you are a more senior professional, question your communication practices. Ask yourself how you learned to do what you do. Was it merely by imitating others or was it through searching for what works and what does not? Look for opportunities to learn further. If you no longer have the time (or the humility) to

enroll in a full-fledged training program, at least read about how to communicate well or attend short sessions on the topic.

Above all, ask for—and listen to—feedback from your audiences. Ask specific questions, too. If you merely ask colleagues whether they liked your talk, they will likely give you a polite but possibly insincere yes, an answer from which you will not learn.

No matter how experienced you are, you can keep learning forever by being highly critical of every presentation you attend, every document you read and every poster you look at. Effective communication is all about the audience; your intuition as a member of that audience is therefore a much better guide than the preconceived ideas you may have as a speaker or writer. You may find it hard, however, to learn from good examples: a brilliant piece of scientific or technical communication will have all of your attention on the content, with none left to notice what, exactly, has made the communication so effective (unless perhaps in retrospect).

Examples of what not to do are easier to analyze. Each time you get frustrated by a presentation or document, ask yourself why. What, specifically, did the speaker or author do that prevented you from understanding or that otherwise distracted you? Is a certain piece of information missing? Is the vocabulary inappropriate? Is the structure unclear? Is anything drawing attention onto itself rather than on the content?

Then think about what would be a more effective approach. You may contemplate whether to share part or all of this feedback with the speaker or author and thus help him or her to learn from it, too. But at least for yourself, let nothing pass: develop zero-tolerance for poor communication. ▲

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