

Soft Skills in a World of Hard Data

Tips to strengthen your communication and leadership skills and make a lasting impact.

By Lynne Friedmann

Shortly after being promoted to chief engineer at the public television station in Austin, Texas, in the early 1990s, David Otey eagerly accepted the opportunity to speak at a national conference of broadcast engineers. He delivered his paper to a near-empty room where he stood in the dark using projected slides “as a crutch.”

A decade later, Otey’s communication and leadership skills made him the top choice to design and run a multi-year, multi-million-dollar project to train 10,000 TV engineers and technicians in new digital technology. Today, he is a motivational speaker and trainer to scientists and engineers.

Otey credits three principles for his transformation from lackluster conference speaker to communications expert. These insights and other skills were the focus of the AAPS annual meeting session *Soft Skills in a World of Hard Data: Negotiating a Scientist’s Role*. It all starts with communication.

COMMUNICATION

Communication is more about people’s need than about your need to share information.

“That did not come easily to me as an engineer because I had long thought my job was to share what I knew,” he said.

Effective communication requires both knowledge of your audience’s needs and a

“specific purpose.” In other words: What would you like the audience to think, do, or feel differently as a result of your presentation? You can’t answer that question without knowing a thing or two about your audience. Obtaining this information can be as straightforward as asking conference organizers for input and contacting a few audience members in advance. Otherwise, you could run the risk of dumbing down the information you present.

Once the presentation’s specific purpose is established, it becomes a filter through which “no piece of information or slide—no matter how attached to it you are—is included unless it supports that specific purpose,” advised Otey.



In addition to the scientific data in a presentation, Otey encourages researchers to share personal information about what prompted their interest in the research problem, what obstacles were encountered, and how those obstacles were surmounted.

"Story is the most basic unit of human interaction," he said. "Sharing stories creates empathy that stimulates production of oxytocin in the brain thereby creating a closer bond with an audience. Your story is unique. Use it to distinguish yourself from others."

LEADERSHIP

Good leaders ensure all people are heard in a place of safety.

If you are not already in a position of leadership, you will be one day as your scientific career advances. Therefore, the sooner you look for leadership training opportunities the better.

"Leadership is not something you're born knowing, but it is transferrable knowledge," said Otey, who highly recommends as a starting point the leadership training offered by Toastmasters International (see Resources).

Personal experiences will also shape you as a leader. Early in his career, Otey recalls being taken aback by a half dozen engineers in a room vehemently disagreeing about the best way to solve a technical problem. What Otey was witnessing was an example of "idea conflict," which somewhat surprisingly turns out to be a positive dynamic.

"These engineers were not in personal conflict," he said. "It was their ideas that were in conflict."

The opposite of idea conflict is "group think" in which people play it safe because they are afraid to speak up and share an opinion contrary to others in the room. "When that happens, you're not able to make good, robust decisions," said Otey.

"In fact, never make a decision until there is disagreement," he said. "You've got to make it safe for people to disagree. If your whole team agrees to move in one direction, assign someone the role of 'devil's advocate.' Say to them: 'Will you please argue the opposite.'"



STAYING TRUE

You can deal with anything if you stay in character.

Otey's third principle came from an experience as a community theater actor that was, quite literally, a painful lesson. During a performance, he took a misstep, fell off a platform, and landed hard on stage suffering a dislocated elbow and multiple fractures of the radius. An alarmed cast member whispered to him, "What do you want to do?"

"Let's finish the scene," was his reply.

What does this advice have to do with being a scientist? At various stages of a research career, you take on or are thrust into roles that at the time can feel as if they conflict with or even remove you from your identity as a scientist.

"Just because you are now a mentor, a department head, or a budget controller for your organization or team doesn't make you any less of a researcher or take away from what ignited your passion to go into science to begin with," he said. "Everything is cumulative. An actor brings everything he or she is to every role. The same is true for you and the roles you take on as a scientist."

Because experiences are cumulative, you may find your lasting impact comes from the research you do, or "it may come from the work you inspire someone else to do by virtue of your role as a leader, as a team builder, or maybe as a story teller."

Otey is aware that his lasting impact as a broadcast engineer did not come from any

gadget or gizmo he built nor any program he wrote, because all of these would eventually become obsolete. Instead, his lasting impact on the television station in Austin came when he learned that a subordinate, who heretofore expressed no interest in promotion, pursued a management job Otey had previously held.

"I didn't want the job until I saw you do the job," he explained to Otey.

"How will you change the world?" Otey asked the workshop audience. "The answer may be in your data or it may be in you." 🌀

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RESOURCES

The Speaker's Quick Guide to Telling Better Stories by David P. Otey (<http://speakersquickguide.com>)

Toastmasters International. A world leader in communication and leadership development, founded in 1905, with chapters in 141 countries. (www.toastmasters.org)

The Cognitive Style of PowerPoint by Edward Tufte, Ph.D., professor emeritus, Yale University. The author is a pioneer in the field of data visualization and noted for his writings on information design. (www.edwardtufte.com/tufte/ebooks)