THE CHRONICLE OF HIGHER EDUCATION

ADVICE

Giving a Job Talk in the Sciences

By Richard M. Reis | MARCH 30, 2001

Not long ago, the chairman of the physics department at Stanford University told a colleague of mine that he had just hired a young physicist who had given "the best academic job talk the department had ever seen."

Curious, I called the new physics professor and asked what it was that she had done.

Although flattered, the assistant professor was taken aback, since in her mind she hadn't really done anything all that special. "I just asked myself what were the three things I wanted them to remember from my talk and then told them those three things over and over in as many different ways as I could," she recalls. "I wanted the audience to leave my talk talking about my talk, and to be able to grab anyone in the hallway who had not attended and say, 'You won't believe what I just learned.'"

In short, she succeeded by following a simple, yet often forgotten adage, "Tell them what you are going to say, say it, and then tell them what you said."

As a doctoral student or postdoc seeking a professorship, your academic job talk may well be the most important presentation you will ever give. An excellent talk can get you the job, while a poor one will almost surely eliminate you from contention.

Remember that in addition to testing your research competency, such talks are a way to assess your teaching ability, something that is being done much more frequently, even at research universities. Tuition and room and board at many private colleges and universities can now total more than $1,500 a week -- or more than $100 for every in-class session. Students and parents want to know they are getting their money's worth, and so do the departments hiring new faculty members.

Your ability to communicate well, to show enthusiasm, and to make good use of various

media in a job talk all correlate highly with good teaching.

For most department heads and deans, making the correct hiring decision is their most important task. It is their legacy. Your job is to convince them, within a very short period of time, that you are the most qualified candidate. They want to know what kind of researcher, thinker, and teacher you are going to be. Thus, it is important to place your current work in a broader context and to tie it to key issues and problems particular to your field.

Richard Zare, a professor of chemistry at Stanford, calls this skill "T competency," where disciplinary depth is the vertical bar of the "T" and cross-disciplinary proficiency is the horizontal bar.

Your presentation needs to be customized to your audience. While most of your listeners will consist of faculty members and students from your host department, don't assume that all of them share your particular technical background. It is also likely that professors from related departments may be invited to your talk. It is certainly a good idea to ask your host ahead of time whom your target audience will be. "Sophisticated but not specialized" is the way one faculty member suggests that you think of those in attendance.

Michele Marincovich, assistant vice provost and director of Stanford's Center for Teaching and Learning, has counseled hundreds of students and postdocs about their academic job talks. She offers this advice:

- Don't wait to prepare your job talk until the last minute -- it is more than just a "brain dump" of your dissertation. It's crucial to be able to go beyond your dissertation. Be well enough prepared that you can allow yourself to be spontaneous.
- When you write out your talk in advance, focus on what you want people to be thinking about as they leave; it will help you concentrate on the essentials. And make your talk interesting with good examples, relevant anecdotes, and significant details.

- If speaking to a mixed audience, avoid highly technical or specialized terms.
- Science is changing and increasingly includes previously underrepresented groups. Use inclusive language -- "she" as well as "he," for example -- and language that is respectful of all groups.
- Using humor in your job talk can be risky, but if it comes naturally to you, go ahead and be funny. If it doesn't, don't try to fake it.
- There will usually be a question-and-answer period. There is no way to predict all the questions you might be asked, but you can practice by having friends listen to your talk and then ask you the hardest questions they can think of.
- Few speakers reach every listener all the time, so don't focus on unresponsive audience members. In fact, you may see a lot of unresponsive listeners. Be aware that in many science and engineering fields, there is a tendency for much of the audience at a job talk to act that way, either because they're trying to make the experience more challenging or simply because they're concentrating on critiquing the presentation. Try to stay in touch with your audience, but don't try to decide the success of your talk while you're still giving it.

Job talks in the sciences are often based on extensive data, charts, and graphs. If you have materials that summarize the key results of your research, by all means include them in your presentation. However, raw data and detailed statistical analysis are best handled either as a handout at the end of your talk or through overheads shown during the question-and-answer period.

Ms. Marincovich offers the following tips for using a laptop display or an overhead projector:

- Talk to the audience, not to the projector image or the projector.
- Give a "roadmap" (overview or outline) of your talk at the beginning and/or as a handout.
- Turn off the projector at appropriate times (it can be distracting to be talking about

one topic while a slide of an unrelated topic is still projected on the screen).

- In addition to the slides you plan to use in your talk, have a few extra slides in reserve that you can use during the Q&A period to elaborate on your research.
- Check for consistency in the appearance of your overheads and slides.
- Don't use too many overheads or slides. Every phrase on an overhead or slide should "say something" or summarize the main point of what you will be saying. Also, be careful not to just recite the phrases on your overhead. Overheads should not be your notes.

You can further reduce the mystery surrounding the academic job talk by sitting in on a few given by candidates for positions at your own institution.

Finally, learning how to give a good job talk as a young scholar can pay off later on in your career. Paul Percival, a professor of chemistry at Simon Fraser University in British Columbia, recalls an incident in which a departmental tenure committee and a dean came to opposite conclusions about a tenure candidate.

"When the candidate came before the university tenure committee he gave what amounted to a short 15-minute talk on his research and it absolutely thrilled the committee members. He turned out to be such a compelling teacher that he convinced us thoroughly, not only of the value of his research area, but of the fact that he was such a top-notch teacher. As a result it went from the stage where the committee had been more or less evenly split, to a unanimous decision in favor of the candidate after his talk."

Richard M. Reis is director for academic partnerships at the Stanford University Learning Laboratory, and author of Tomorrow's Professor: Preparing for Academic Careers in Science and Engineering, available from IEEE Press or the booksellers below. He is also the moderator of the biweekly Tomorrow's Professor Listserve, which anyone can subscribe to by sending the message [subscribe tomorrows-professor] to Majordomo@lists.stanford.edu

Have a question or a suggestion for Richard Reis? Please send comments to

catalyst@chronicle.com

To purchase Tomorrow's Professor on line, choose a bookseller: