Meeting posters are key message boards for junior scientists to communicate not just their research findings and ideas, but also themselves. And chances are that any scientist will make many more presentations in front of a poster than from a podium. That leads me to ask: How do you create your posters? Do you simply make a few tweaks on your most recent manuscript or the one you are assembling? If so, you may not be making the most of the opportunities that come with giving poster presentations. There will certainly be similarities in content between papers and meeting posters, but there are also crucial differences—enough to warrant a careful look at them in order to optimize your next presentation.

As a science communications coach/consultant, I recommend that each time you undertake any sort of presentation, ask yourself three questions: 1) What are your objectives, 2) What message(s) do you want to convey, and 3) Who is your audience? People often forget that all three questions need to be addressed for both you and your audience to benefit fully from the experience.

The Objective(s)
What do you want this poster presentation to accomplish? Get the word out about your latest research findings? Solidify your place within a particular discipline? Find a new collaborator to help you move the research forward in a way you cannot do on your own? Share your story with a senior colleague whom you intend to ask for a letter of recommendation? Or maybe simply to tell just enough of your story to have your poster accepted for presentation, justifying travel to a meeting you need to attend for information-gathering or networking purposes. Acknowledging the objective(s) early on can help you decide on the content and the structure of your presentation—in other words, what the story is that you will show and tell.

The Message(s)
When I say “message,” I am of course referring to the scientific message, but I’m including the professional message as well—and they should both be clear in your own mind before you begin to craft the poster presentation.

Your scientific message may be that you have made a great discovery, even a paradigm-shifting one. Or you may have tackled a long-standing problem in a new way and have come up with important insights that extend beyond your immediate field. Or your scientific message may be a small advancement or a report noting that you tried to reproduce a published study and got results that differed from those in the published work. Sometimes one of your scientific messages may involve announcing the direction you intend to take your research, perhaps based on your recent discoveries. You may or may not include any of the above messages as an explicit statement in a poster presentation. Yet whatever the case, it’s useful to make such an explicit statement of your scientific message(s) to yourself and your collaborators/mentor(s) as an element of the preparatory process. One benefit from such an approach is that it helps ensure that everyone concerned
begins with the abstract you submitted, perhaps many months before the actual meeting. That abstract sets a minimum on what needs to be presented, but it sets no upper limit.

Chances are that since submitting the abstract you will have generated new results and perhaps even changed your interpretation of the findings. For that matter, the work may already have been prepared as a full manuscript for submission to a journal. And if so, this is a good news/bad news scenario. The good news is that a completed manuscript means that the story has matured into a complete package—rationale, methodology, results, and interpretations are complete and set up as a unified whole, ready for a (hopefully) successful peer review. The bad news, however, is that a mature story can tempt a researcher to put the whole story into the poster, meticulously fitting as much detail (and as many complete sentences) as possible until not a speck of white space remains. This can be a recipe for disaster, especially when poster viewers may have extremely limited time to view the poster or discuss it with you.

Strategically limiting the overall amount of material you present on the poster can make it inviting. Streamlined posters with clear, easy-to-read formats and simple statements can draw an audience even during the times when you are not standing by your poster ready to tell your story.

But how to decide what to present on the poster, in what order and in what manner? Here’s where bringing in the objectives/message/audience triad can serve you well. As I noted at the start, researchers often draw heavily on manuscripts, or at least the manuscript format, when composing the poster presentation. But the poster format itself—and using the objectives/message/audience approach to edit the information you present—gives you more freedom to tell the story in the way that is most natural for the time and place in which it is being told. For example, you might opt to tell the story by asking and answering a set of simple questions—one question per figure.

The Audience
For the final leg of the triad framework—the audience—make sure to view your poster presentation as others will view it. By this I mean that you, as the presenter, should consider the expertise and interests of the meeting attendees when planning your presentation. For example, the same data would probably require different background, explanation, and discussion in posters presented at meetings of the ASCB or the Biophysical Society or at a small conference on stem cells. However, tailoring a message need not involve making it narrow. Scientists are, by nature, life-long learners, so tailoring your message to your audience doesn’t mean not sharing with them something outside their own discipline or comfort zone. But it does mean that you need to introduce topics in a different way for different audiences.

Shaping the Story Based on the Triad Framework
So having established the framework, you now get to develop the story. Certainly, the story with the presentation is “on the same page” (and hopefully in agreement) with what is to be presented. An obvious and perhaps trivial point—until a misunderstanding arises too late to be easily resolved!

Your professional message, on the other hand, often lies beneath the data. You may want certain meeting attendees to know that you are seeking to move on to the next step in your career. Or you may want to inform people about open positions in your lab. These messages are less likely than the scientific messages to be stated directly in a presentation (although you can advertise an open position on the poster). However, acknowledging them to yourself and your colleagues when you are planning and developing your presentation can help to identify people attending the meeting who should receive your professional message.
Also, you are free to keep methodological detail to a minimum on the poster, and, if you wish, provide greater detail in a handout that accompanies the poster or a laminated card that is stored in a pocket alongside the poster, which can be read and returned to the pocket.

And speaking of telling your story, you may have noticed that I have consistently referred to poster presentation rather than just poster. That’s because the presentation is more than just the physical poster; it’s a mixed media event in which you get to tell the story, accompanied by the poster. I recommend developing a story about three minutes long to tell as you guide the viewer through the poster. Practice alone and then practice with friends and colleagues inside your field and out.

Finally, in addition to having a story, make sure, proactively, that you have an audience. Invite friends and colleagues to visit your poster, even if they already know your story. People standing at the poster listening to your story and asking questions draw other people in, so don’t hesitate to round up your buddies for this purpose. (And return the favor, of course.) Also, if the meeting in question supplies a book of abstracts before the event, investigate the list of attendees and send out a few emails to invite potential collaborators/future mentors to visit your poster.

Poster presentations carry the reputation of being the least prestigious means of communicating one’s science. But by incorporating the notion of objective/message/audience into the development of your presentation, you can increase its effectiveness in conveying your message(s) and so raise the value of your poster presentation for both you and your audience.

—Beth Schachter, Beth Schachter Consulting and Still Point Coaching & Consulting

Note

This essay draws on recent invited presentations delivered by Beth Schachter in the Department of Physiology and Biophysics at the University of California at Irvine and at the Graduate School of the University of Texas Southwestern Medical Center.

The author thanks Robert Majeska for many helpful suggestions.