

Talking Science: Designing and Delivering Successful Oral Presentations

TIPS

Science Talk Objective

- Communicate and generate interest in your research
- Create potential collaborative or funding opportunities
- Help to develop network contacts for advancing your career

First Things First

- Know your audience
- Understand the guidelines
 - When will you be giving your talk?
 - How much time for the talk and questions
 - What do you provide them and what do they provide you?
 - Ask about technical issues

Designing the Talk

- Start as soon as you know you are going to be giving a talk
- Select the Results you want to present – What will tell the best story?
- Always think about providing something for everyone
- Work from the Results and move outward
- Define the major point(s) you want to make in each section
- Define how you should transition from section to section
- Does it flow?

Creating the Slides

- Define the point you want to convey for each slide – make it the title of the slide
- Don't forget the space in between slides – transitioning from slide to slide
- If it's on a slide, it should be talked about it – Is it important or is it extraneous?
- Questions to ask yourself:
 - Does the title convey the major point or result I'm trying to make?
 - Is the figure large and readable enough? Is it understandable?
 - Is the slide too busy or cluttered?
(More slides don't necessarily mean more time)

Slide Tips

- Keep It Simple, Keep It Consistent (KISKIC)
- Dark text on a white background or white text on a dark background
- High picture to text ratio
- Only use custom animation when absolutely necessary
- Stick with primary colors in figures, plots, text, etc

The Delivery

- The talk is not a spoken paper
- Write out what you want to say; use it until you are comfortable saying it
- Make sure you make eye contact
- Project enthusiasm - If you aren't excited about it, why should they?
- Practice, practice, practice, and practice again

Questions and Answers

- Repeat the question so others can hear it
- Make sure you know what is being asked
- Avoid long digressions
- Be creative in saying I don't know

Common Mistakes

- Just too much on each slide
- Too much *text* on a slide
- Reading text on slides verbatim
- Talk seems disjointed, not smooth and logical
- Not clear on what the speaker is trying to convey
- Too many ums and er's; obvious that it isn't practiced
- No engagement with the audience
- Poor job at answering questions at the end

Some Frequently Ask Questions:

Should I include an outline of the talk in the talk?

The majority of the talks that you will give over your scientific career will most likely be about 20 minutes in length; that isn't a lot time. And to be honest, the format of a scientific talk is pretty well established and straight forward; you provide the audience with introduction/background material, define the question or questions you are trying to answer, provide a method by which you planned to accomplish that objective, present the results that you obtained, provide your interpretation of what those results mean in the context of the question(s) you posed initially, describe future directions if appropriate, and finish up with questions. If you do a good job of telling the story you want to tell and the talk flows, you won't need an outline. Remember, each slide cuts into your allotted time, and those "cuts" can be deep when all is said and done. My suggestion is to leave the outline for longer talks where a lot of material or a diverse amount of material is discussed.

My lab mates loved my talk when I gave it to them, but it didn't go over so well when I gave it at the conference. What went wrong?

Your lab and advisor are only one group of people that you should be practicing your talk in front of. Remember you and your lab group are working at a very deep layer of the "scientific onion" and the majority of the people your eventual audience may not always be technically familiar with what you are working. When designing and creating your talk, think about "providing something for everyone"; explanations of things you take for granted can mean the difference between someone getting lost early on in the talk or actually walking away with an

understanding what you do and why it is important. Start your talk with some sort of big picture relevance of what you do and then ease them into the “deep end of the pool” (general to the technical). You can do this on the individual slide level as well, so as to avoid leaving people behind. Verbally and physically point out the things that you most want your audience to remember. Finally, pull it all together at the conclusion by communicating to the audience your opinion on what the results mean in relation to each other and how at this point your results matter at several levels. The most important thing that a speaker can do to ensure that the talk is going to be well received is to practice the talk in front of audiences of diverse backgrounds; the feedback you get will help you to create and deliver the best talk possible.

I feel okay giving poster presentations and have been told I do a good job at them, but I hate giving talks and don't do as well at them. I don't know what to?

Not to worry; you are not alone. In a scientist's early career most of communicating your science is done via poster presentation, so you inevitably end up giving a lot of them and thus become comfortable in communicating your science in that way. As you progress in your science career, whether you continue in research or in other areas of science, the way in which you communicate science will be more in the form of a science talk. Being good at giving posters does not automatically translate into giving a good talk. There are some inherently different challenges one must overcome to give a good talk, and there is someone or someplace you can go to for help in overcoming these challenges. Designing a good talk requires the advice and feedback from your mentor, lab mates, and others, and taking advantage of the resources at your disposal. Learning to deliver a good talk requires a lot of individual practice to become comfortable with the material you are presenting. It also requires practicing as much as you possibly can in front of a lot of different audiences to simulate conditions you'll face when you give the talk for real.

Even though sufficient practice and feedback sound like the recipe for success, you may also need to seek out assistance from your university's graduate student or postdoc office to get help with overcoming challenges that may require very specific resources that no amount of practice will help overcome. Utilizing available resources and taking every opportunity to give talks will help you to develop the skills becoming an effective communicator. One of the best networking tools you can develop for your networking tool box and one which will help advance your career, is the one labeled “That person gives a great talk”.