

General presentation pointers for scientific talks

Presenting – General Concepts

Think about the 1–2 central points that you want your audience to associate with you/your talk. *FOCUS EVERYTHING AROUND THESE MAJOR POINTS!* Tell the audience why they should care too.

KNOW YOUR AUDIENCE and tune your presentation appropriately. Don't bowl people over with technical details if they aren't going to be familiar with them or if you haven't introduced the proper background/concepts sufficiently. You should either translate the details for them, build them up to understand, or leave the details out entirely if they aren't going to help you make the main point(s) that you want to make. This is a great opportunity to teach your audience something memorable.

Don't use notes or read off of your computer; use the slides as a guide for your talk to your audience. Speak to the audience, not to your computer. Make eye contact – it helps engage your audience. Tell your audience a 'story' – it will be easier and more interesting for them to follow.

Describe what every figure/graph/table/etc. is before talking about the data being shown.

Define exactly what the audience is looking at (the data or format may be new to them).

"As you can see..." is usually not a good way to start describing a piece of data if there are those in the audience that aren't familiar with what they are seeing.

Take the time to describe the axes, rows, columns, panels, etc. before jumping to the data.

Don't be afraid to repeat important concepts/info/major points throughout your talk (or at the end of each slide) to remind your audience and to reinforce the major points that you want to make. Sometimes a mid-talk summary slide may be helpful if you are presenting a lot of data.

You never know who might show up at your talk, so every presentation is an opportunity to make a good impression. It's also a good place to make a bad one if you don't prepare.

SHOW ENTHUSIASM! Enjoy the opportunity to tell others about your work!

Preparing Slides (A great resource – [Naegle 2021, PLoS Comp Bio](#))

Making an outline of all of your slides is a good way to start. This can be done by first laying out the overall theme/title for each slide and then adding the major point(s) that you will make on each slide. Start broad, then narrow in on your specific question, and then zoom back out to talk about how your specific work applies to the big picture that you introduced in the beginning.

Every slide should have a descriptive title. A good title describes what is being shown and/or the punch-line of the shown data/info. Having a title of "Results", "Methods", etc. is not informative and misses the opportunity to convey important information.

MINIMIZE TEXT. Use figures/images/cartoons instead.

Use your slides to guide you through your talk – *DO NOT USE NOTES OR READ FROM YOUR SLIDES.*

Have ~2 points that you would like to make on each slide.

Use figures and minimal text to help key/remind you and your audience of the major points.

Make sure that every figure and piece of text that you are referring to is easily seen (even by those sitting in the back of the room).

For a shorter format talk (15 minutes) a good layout could be to include the following...

Title/Introduction slides (1-3; big picture stuff and why it's important)

Background and preliminary data (2-3; only what's necessary for your talk)

Method(s) to address the question (1-3; flowcharts and figures help)

Results (the bulk of your slides = as many as you need/will fit in the time allowed)

Summary/Conclusions slide (1; reinforce main findings and importance/summarize talk)

Future Directions (1)

Acknowledgements (1; include your mentor, group members, funding, collaborators, etc.)

Preparing Yourself

PRACTICE, PRACTICE, PRACTICE – out loud, at least twice, standing up, without notes, using a “laser” pointer (keep it under control), and in front of others if possible.

Make sure that you will complete your talk in the time allotted. It's not courteous to other speakers and the audience if you take extra time, especially when there is a tight schedule for the session.

Presenting – Starting out

Often the person introducing you will read the title of your talk. To avoid repeating it, be prepared to start with an introduction that is a different take on the title, or just start with by describing the major goal, e.g., “Today I'd like to talk to you about my work using X approach to look at the question of Y since it's important for Z.”

Memorizing your first sentence or two will ensure that you know exactly how you will start. Your talk will start smoothly, which can really determine how the rest of your talk will proceed. “A smooth start makes your science look like art.” -JCA, *circa 2014*

Many people talk much faster in their actual talk as compared to when they practice.

Take a slow, deep breath before you begin speaking to help set your pace from the beginning.

SET UP THE BIG QUESTION YOU ARE ADDRESSING OR MAJOR POINT TO RELAY EARLY IN YOUR TALK

Referring to it throughout your talk will reinforce the major point(s) that you want to make.

Presenting – Finishing up

Practice your acknowledgements and the ending of your talk. If you aren't prepared for this, it can take longer than you expect, make you sound disingenuous, and/or cut into time for your questions.

A good way to end your talk is to say something like, “...Lastly, I'd like to thank you all for your attention, and at this point, I'd be happy to take any questions.” Providing a definitive end point prompts your audience to clap and helps avoid awkward endings.

When someone asks a question, repeat it out loud before answering. This does several things:

It repeats the question for those who may not have heard it.

It allows you to confirm with the asker that you heard the question correctly.

It gives you a little bit of time to think about the question before you answer it.

Be honest if you don't know the answer to the question and be clear if you are guessing.

If there are questions that you can anticipate, have some extra slides that may have additional information/data that will help you answer the question and/or make additional points.