Scientific Presentation Skills

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The Common Presentations in Scientific Communities

Scientific Oral Presentations

The Poster Session
- Everything is on one poster in front of you; semi-formal; dynamic; you pick and choose what story you want to focus on depending on your audience.

Lecture ‘powerpoint’ style
- Audience is in classroom mode.
- Presenter must remember that the the audience is only seeing this for the first time and once, and our memory is short so you need to reinforce and tell a story. *“Tell'em what you are going to tell'em. Tell'em. Then tell'em what you told'em.”*

The Layman Pitch
- Informal and impromptu; usually you bust out a pen and paper and try to use lots of analogies. Seldom rehearsed.

So you have a sense of discovery… Show us!
This is about you!

✓ Look **respectable**: Dress as if it were a job interview. Don’t chew gum

✓ Courtesies to other speakers:
  ✓ Be on time
  ✓ Pay attention
  ✓ Come up with a question for each speaker
  ✓ TURN OFF YOUR *%$#*!@ PHONE!

Sara nearly hit Sally with her magnifying glass when Sally’s phone went off during Olivia’s presentation.
Get your slides to work for you
Slides

✓ Start with a title page including:
  ✓ Your name
  ✓ Your affiliation
  ✓ The title of your talk
  ✓ Might include a catchy graphic that encompasses what you are going to talk about
Outline slides

✓ Often, after the title slide, speakers will include an outline slide
✓ Unless your talk is going to follow some path that requires previous explanation, I would **avoid** an outline slide
Outline of this talk

✓ Introduction
✓ Experimental Details
✓ Results
✓ Conclusions and Future Work
✓ This slide just told you what is going to be fairly obvious from the upcoming slide titles, but hey, at least it wasted a minute of our time.
Prepare your material carefully and logically

Tell a story. The story should have four parts:

**Introduction and Motivation (Who, What and why?):** Statement of the problem - but it should indicate your motivation to solve the problem, and you must also motivate the audience to be interested in your problem. Good speakers often broaden the Introduction to set the problem within a wide context. In other words, the speaker must try and convince the audience that the problem is important to them as well as the speaker.

**Method (When, Where and how?):** includes your approach and the caveats. The Method is more interesting to the listener if this section is "story like" rather than "text book like". This adds the human element to your research which is always interesting.

**Results** section is a brief summary of your main results. Try and be as clear as possible in explaining your results - include only the most significant details.

**Conclusion/Summary and Future work:** section should condense your discoveries, ideas and implications. This should be brief - a bullet or outline form is especially helpful. Be sure to connect your results with the overview statements in the Introduction. Don't have too many points - three or four is usually the maximum.
✓ Don’t let a thousand words say what a nice picture could
✓ Use brief points to remind you what you want to say
✓ Use your slides for difficult concepts
✓ If possible, test your slides on the actual projector system
  ✓ colour scheme
  ✓ edges of slides
✓ Text and graphics near the edges may get cut off
✓ **Not every colour combination is visually appealing or easy** to read, **and what looks good on your bright laptop monitor might look pretty crappy on a duller projector.**
Polish your graphics. Here is a list of hints for better graphics:

- **Use large letters** (no fonts smaller than 16 pts!!) To see how your graphics will appear to the audience, printed slide on the floor - can you read it standing up?

- Keep the graphics clear and concise. Don't show images you won't need.

- A little professional effort on graphics can really make a talk impressive. If someone in your group has some artistic talent (and you don't) ask for help or opinions.

- **Use color.** Color makes the graphic stand out, and it is not that expensive anymore. However avoid red in the text - red is difficult to see from a distance. Also, check your slides using the projector. Some color schemes look fine on paper, but project poorly.

- **Use cartoons** I think some of the best talks use little cartoons which explain the science. It is much easier for someone to follow logic if they can see a little diagram of the procedure or thought process that is being described. A Rube-Goldberg sort of cartoon is great for explaining complex ideas.
More on slides

✓ Make sure graphical content is of the highest quality and consistency
✓ Make sure there are no spelling errors
✓ Put brief references on each slide rather than a “References” slide at the end of the presentation (nobody ever leaves this up long enough to be useful)
Content

✓ Don’t use excessive jargon
  ✓ Your audience are chemists or biologists, but not necessarily familiar with your project
  ✓ Define terms (esp. abbr.) first time you use them and occasionally remind of their meaning

✓ Don’t force yourself to talk about everything
  ✓ If your talk is long, give us the best stuff
  ✓ A talk that runs long is considered rude
Less is more. Don’t overwhelm your Audience

Don't put in too much material on your slides!

- Good speakers will have one or two central points and stick to that material.
- How many talks have you heard where the speaker squanders their time on unessential details and then runs out of time at the end?
- The point of a talk is to communicate scientific results and ideas, not to show people how smart you are (in case they can’t figure it out for themselves).
- Less is better for a talk.
- Furthermore, no one has ever complained if a talk finishes early.
- Finally, assume most of the audience will know very little about the subject, and will need a clear explanation of what you are doing not just details.

\[ \Delta G^o = \Delta H^o - T\Delta S^o \]

\[ R_{\mu\nu} - \frac{1}{2} R g_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu} \]

- Avoid equations. Show only very simple equations. The problem is that equations are a dense mathematical notation indicating quantitative relationships. People are used to studying equations, not seeing them flashed on the screen for 2 minutes.
- The fact is, equations are distracting. People stop listening and start studying the equation. If you have to show an equation - simplify it and talk to it very briefly.
More on slides: Animations

✓ Animation can be useful sometimes but it can be distracting or even annoying if you overdo it!
Acknowledgements

✓ It is customary to end the talk with an acknowledgement slide thanking those who helped you get to this point, and especially sources of funding.
✓ This slide could include logos, and a photo of labmates.
References (don't do this! put them on the individual slides)


don't forget PAGE #’s like me!
Now let’s talk more about you
Your Public Speaking Voice

✗ Develop a public speaking voice that is:
  ✗ louder
  ✗ clearer
  ✗ more enunciation

than your normal conversational tone

✗ Try to avoid “UM”s or other nervous tics (silence sounds better)

✗ Look confident: Stand up straight
Public Speaking Builds Confidence

Confidence

Public Speaking

Practise

Grammar

Vocabulary
Delivery

✓ Know what’s coming up so transitions go more smoothly.
✓ Be comfortable with the talk
✓ Use your public speaking voice
✓ Practice. Practice. Practice.
Practice your Talk

There is no excuse for this lack of preparation.

• All talks have restrictions with regards to time. The best way to familiarize yourself with the material and get the talk's timing right is to practice your talk.

• Some people may be natural story tellers, and understanding the material better than others is enormously helpful… but practice is beneath them no one.

• Practice in a mirror is one way, but even better, practice in front of a small audience, in the room you are presenting.

There is no such thing as good luck…

* Luck is when preparation meets opportunity

Practice, makes perfect….

* Perfect practice, make perfect!
Delivery

- Do not read your slide titles (it breaks the flow of the talk)
- Make the talk flow. Know what slide is coming up next, and be talking about it while the slide is changing
- Do not read your slides. In fact, use only minimal words (better: images) on slides as memory cues for what you wanted to say
- Erase the blackboard before you start (you don’t want to be upstaged)
Chronic Boredome Syndrome, or CBS was first identified in 2010 by a research group in Switzerland. The symptoms of CBS include ennui, malaise, general feeling of world-weariness. It was found to be caused by overly strong interaction of certain OMG and BBQ ligands with the WTF receptors in the brain. WTF inhibitors are found to reduce symptoms of CBS up to 73% in double-blind controlled mouse studies.
✓ Identified 2010 in Switzerland.

There is some hope:

#include references on the individual slides, with enough detail that someone could find the paper. This is strongly preferred over a "references" slide at the end.

Address your audience without looking nervous

Avoid making distracting sounds.

- Everyone gets nervous speaking in public. But sometimes the nervousness often comes out as annoying sounds or habits that can be really distracting. Try to avoid "Ummmm" or "Ahhh" between sentences. If you put your hands in your pockets, take the keys and change out so you won't jingle them during your talk.

Talk to the audience not to the screen.

- One of the most common problems is that the speaker will speak to the screen.
- It is hard to hear the speaker in this case and without eye contact the audience loses interest.
- As suggestion don't start talking right away when you transition to your next slide.
- Let your slide do the talking for you
- Remember the audience usually can't concentrate on the material and listen to you at the same time.
- If you are nervous try to pick out a few people in the audience and pointedly talk to them as though I were explaining something to them.
Use humor if possible

- A joke or two in your presentation spices things up and relaxes the audience. It emphasizes the casual nature of the talk. I am always amazed how even a really lame pun will get a good laugh in a science talk.
- NEVER make fun of someone else. Always keep it light. Self deprecating is the safest
Conclusions

Always remember to summarize, and

• Have only a few conclusion points.
• People can't remember more than a couple things from a talk, but they should be the key points.
Love your audience

Be personable in taking questions.

- Questions after your talk can be scary. But questions are very important. If there are no questions after a talk you should feel disappointed. It means you failed to stimulate the audience, or you failed to communicate.

- Questions tell you what part of your talk the audience did not understand. Questions may also help you focus your research or help you in the write up.

- So what is the best way to answer questions:
  - **Repeat the question**. This gives you time to think, and the rest of the audience may not have heard the question. Also if you heard the question incorrectly, it presents an opportunity for clarification.
  - **If you don't know** the answer then say "I don't know, I will have to look into that." Don't try to invent an answer on the fly. You are only human and you can't have thought of everything.
  - If the **questioner disagrees** with you and it looks like there will be an argument then defuse the situation.
  - **Never** insult the questioner. Be honest and humble.
Any Questions?

✓ Students have a tendency to end their talks with a "Questions?" slide, but this should be avoided.
✓ It would be more professional to leave an Acknowledgements slide up while fielding questions
✓ The speaker should never select their own questioners. This job falls to the session chair.
CaB Research Leaders Challenge 2015

Saturday, March 21, 2015

10:30am — Check in
11:00am - Presentations
12:30pm - Lunch
1:30pm - Presentations
2:30pm - Adjournment

Winners and Prize $$ awarded on April 1, 2015
during our Alumni Mentoring Networking Event

Sign up at...
http://goo.gl/forms/ReE8zhX7a

Last groups standing...

Group E
Daniela Araujo
Fahad Rashid
Mahad Omar
Andrew Lam
Vanessa Paz-Barreiras

Group H
Margarette Francis
Manuam Zain
Maham Hijazi
Reeda Mahmood
Riza Unabia

Group L
Gemma Mancuso
Murad Jabarov
Nathan Battersby
Viktoria Weisz
Ramya Selladurai

Group P
Ahmad Shams
Aesha Patel
Zehra Jaffer

Group O
Donny Stanroom
Omeir Parkar
Tanuja Sutradhar
Zuhra Omary
CaB Research Leaders Challenge 2015

Saturday, March 21, 2015

Must address proposal concepts and headings

- Introduction
- Natural Resource Process to be improved
- How Genomics will be applied to improve Natural Resource Process
- Impact to Canada

Sign up at...
http://goo.gl/forms/ReE8znhX7a

- Talks should be 15-20 min.
- A maximum of 10 minutes of questions will follow
- All team members must address at least one slide/concept
- 50% content, 50% style