
How to give a technical talk?



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Sources

- Paul N. Edwards, “[How to give an Academic Talk](#)”.
- John E. McCarthy, “[How to Give a Good Colloquium](#)”.
- Uri Alon, “[How to give a good talk](#)”.
- P.R. Halmos, “[How to talk Mathematics](#)”.
- Inputs from Eric Nordberg
- Personal experience

Talk flows in you

“Tell ‘em what you’re gonna tell ‘em; tell ‘em; and tell ‘em what you told ‘em”.
- Aristotle

- Why?
- For Whom?
- What? How?
- How long?

Alternative: Show them the fire and sell the fire extinguisher. A story to remember!

Purpose

Whose talk is it anyway?

Finding your purpose

- ***“To attract and inform”***
- Why must I give this talk?
 - To please my mentor/organizer?
 - To impress my labmates/colleagues?
- What can I use this talk for?
 - To get the audience excited about a research area/problem...
 - To inform fellow researchers about our findings...
 - To invite healthy criticism and suggestions...



Source: tariqradio.com

Ask not what your talk does for you!

- An effective talk must:
 - Communicate your arguments and evidence
 - Persuade that they are true, and why the audience must care
 - Be interesting and entertaining
- Your work/idea is the product.
- Talk is your sales pitch!

*Every boring technical talk
is a wasted opportunity.*



“What if we don’t change at all ...
and something magical just happens?”

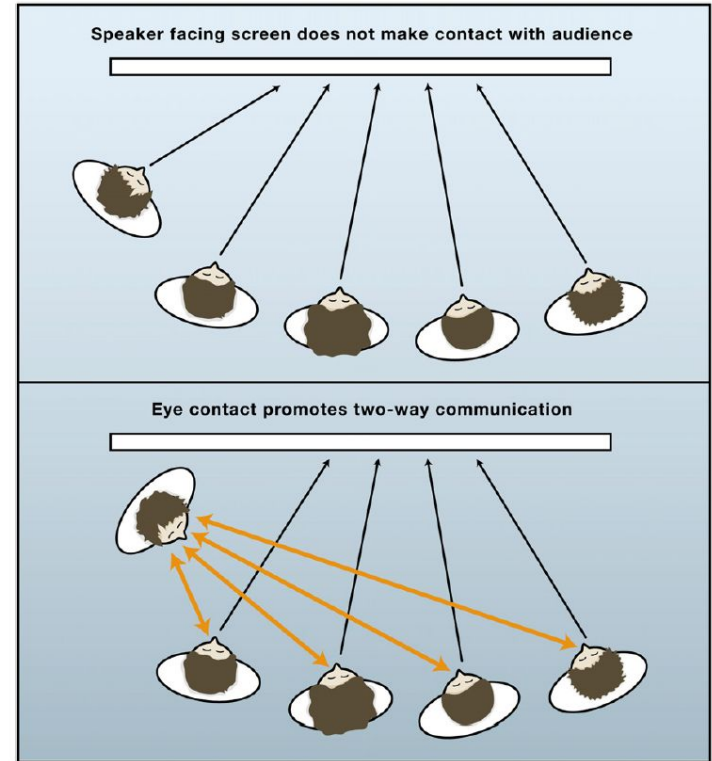
Source: fourquadrant.com

Audience

— For whom does the speaker toil? —

Harvesting the attention

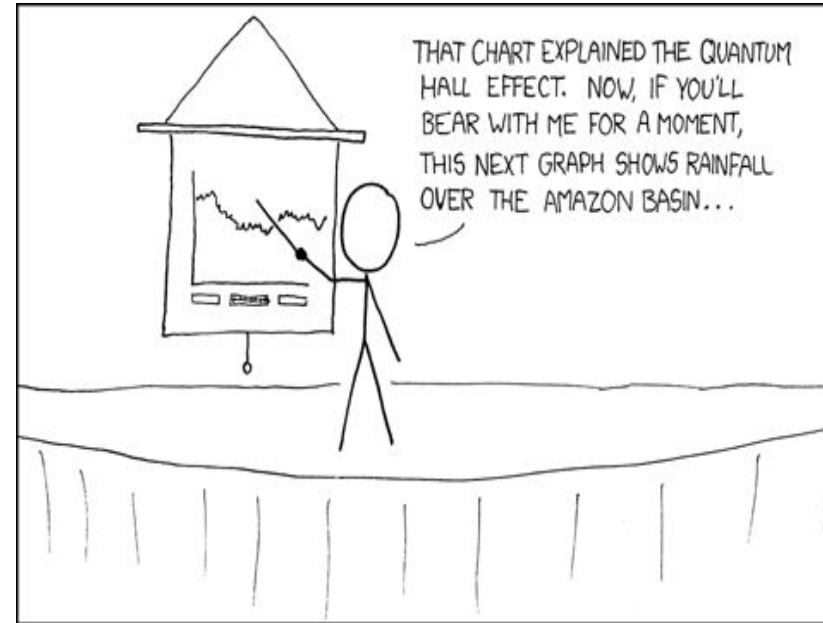
- Listening is hard work!
- Talk ≠ Monologue. Talk = Conversation.
- Look at them. Talk to them.
- Own the floor.
 - Don't be intimidated.
 - Don't try to impress with your brilliance.
- Handling questions
 - Repeat, acknowledge, answer/accept



Trees and the Forest

- Carry everyone along.
 - Talk is not just for your mentor.
 - You lose the audience only once.
- > 50% of the time: General audience
 - Background and context
 - Why is this important and interesting
 - Why should they care?
- < 50% of the time: Expert audience
 - More details on the first half
 - Particular contributions

Source: xkcd.com



IF YOU KEEP SAYING "BEAR WITH ME FOR A MOMENT", PEOPLE TAKE A WHILE TO FIGURE OUT THAT YOU'RE JUST SHOWING THEM RANDOM SLIDES.

Content

— What do you have to say for yourself? —

Not a pie-eating contest

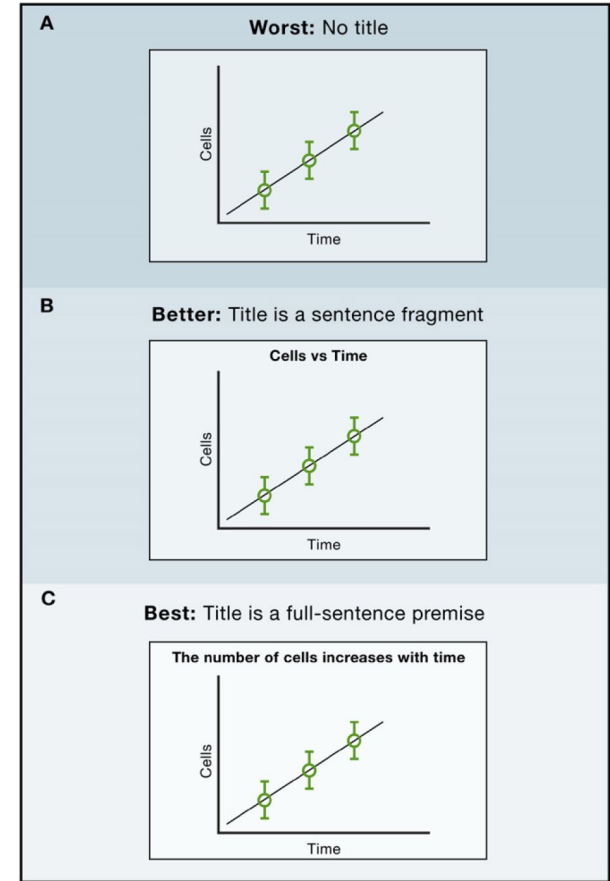
- Have a premise. Make a point.
 - Think in terms of a punchline or a take-home message.
 - Expand, argue, and persuade.
 - Talk $\neq$ Paper. Be precise and concise.
- You, and only you, are responsible for your presentation.
 - Proof-read typos, factual errors, etc.
 - Be ready to defend every sentence.
 - Add references for anything that is not yours. (ideas, text, figures)

Sights and Sounds

- Make sure your slides look good when projected.
 - Fonts, colors, sizes, etc.
 - Maintain a healthy text-to-images ratio.
 - Use animations/transitions wisely.
 - Test out additional features (videos/software demos, etc.)
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- Talk, don't read.
 - Speak slowly. Be loud and clear.
 - Move around, vary the pitch, get them excited.

Show and tell!

- Use diagrams to explain complex ideas.
 - System description, methodology, etc.
- Use plots and charts to show quantitative results.
 - Label every axis in every chart
 - Units when applicable
 - Elements distinguishable by color, linestyle
 - Use the caption effectively.



Time

tic toc ✓ talk!

Wibbly-wobbly timey-wimey

- Pace your talk and finish on time.
- Theory of relativity: Time runs faster/slower than for the audience.

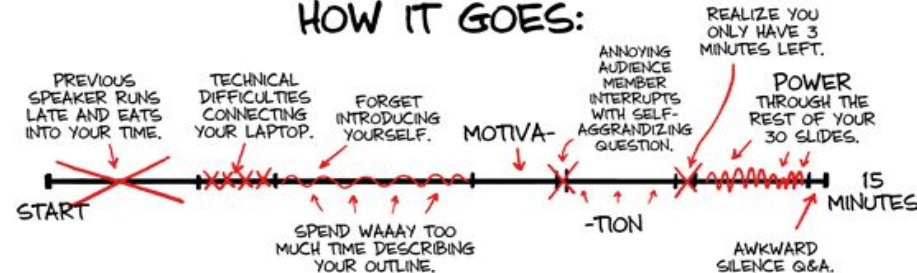
- Slides are not there to be skipped.
- # of slides < # of minutes
- Be prepared for interruptions.
- Factor in questions.

- Practice. Practice. Practice.
- Dry runs are useful.
- If you want to improvise, practice it!

HOW YOU PLANNED IT:



HOW IT GOES:



Make a PACT.

Make an IMPACT.

Purpose

Audience

Content

Time

NDSSL Seminar Series

— Guidelines for 2016-17 —

Guidelines

- Sign-in sheet. Prior notice for absence.
- No laptops or phone usage.
- Talk duration:
 - Senior students/faculty - 40+5 mins
 - Junior students - 25+5 mins
- Presenter:
 - Title and abstract by Wednesday evening
 - Slides by Friday morning
 - Get it loaded and tested at the venue

Updates

- Seminar Series committee: Prior feedback on slides, dry runs
 - Srini Venkat, Eric Nordberg, Ray Ren, Mandy Wilson
 - Grad student?
- Peer review (single-blind):
 - Three students, one faculty, and mentor
 - Evaluation criteria:
 - Contextualizing for NDSSL
 - Clarity of presentation
 - Quality of slides
 - Usage of time
 - Handling questions
 - Technical merit (if applicable)

Questions/Suggestions?