

Giving Effective Presentations

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The Four Steps to Success

1. Decide what to say
2. Make slides
3. Practice
4. Give a talk

The Four Steps to Success

1. Decide what to say
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3. Practice and Revise
4. Give the talk

DECIDING WHAT TO SAY

First, understand your topic

- Read a **secondary source** (e.g., textbook) to figure out the key ideas, how they fit into the big picture
- Check **another** secondary source or two to get more clarity and a more balanced view
- Go back to **original sources**
- Look for **more recent work** that has built on or applied the concepts you'll present

Next, think about your audience

- What do you think the audience **already knows**, and what do they **need to know**?
 - don't talk over their heads, don't bore them
- How can you make your presentation **interactive** to help them connect to the topic?
 - puzzles
 - games
 - polls

Organize all of this into a talk

- Decide which ideas are **most important**
 - structure the talk around these
 - don't confuse these with the technical details
- Create a talk **outline**. For example:
 - Introduction: the big picture
 - what problem is solved?
 - why did this problem need to be solved?
 - how does the solution work?
 - Formal description of the solution
 - Evidence that the solution works (proof; experiments)
 - Comparisons to other approaches [sometimes comes second]
 - Summary

MAKING SLIDES

Outline!

- Make a **slide-by-slide outline**
- **Refine** it until it's perfect
 - much easier than changing polished slides later
- If a slide is getting too complex, **split it** in two
- Ensure the **key points** get delivered early
- Make sure the **flow is logical**

Context

- The most common mistake:
 - too much time on **technical details**
 - too little time on context
- Context:
 - what is the **big idea**?
 - what **problem** does it solve?
 - why is this problem **important** to solve?
 - how does it **differ** from other alternatives?

Slides: Organization

- Make the **talk's structure** easy to figure out
 - outline slides
 - verbal reminders and transitions
- **One point** per slide
- Each slide organized **like an outline**:
main points
 - sub points
- Keep text as **brief** as possible

Slides: Design

- **Clarity is the most important thing**
 - your slides don't need to be beautiful, just effective
- Legible
- Not too **cluttered**
 - while they're reading, they're not listening
- Visually **interesting**
 - colour
 - pictures (but make a point, don't distract)
- Usually **1-3 minutes** per slide

PRACTICING AND REVISING

Practice!

- Memorize the **first little bit** (but not the rest)
- Actually **practice out loud**
 - don't just read it in your head
 - have a real audience (but not the first time)
 - have your friend make notes and critique afterwards
 - practice it *at least 3* times
 - time yourself
- **Change your talk** based on what doesn't work when you practice

GIVING THE TALK

Getting started

- People will **decide in the first 60 seconds** whether or not to pay attention to your talk
- Help them answer the questions **“Why should I listen to this?”** and **“Why does this matter?”**
- A technical talk is **not a mystery novel**
 - Don’t build to a suspenseful conclusion
 - Tell them the punchline as quickly as possible
 - The rest of the talk is delivering on this promise

Rhetoric

- Don't **read** your slides
- **Repeat** points that are important
 - this ensures they don't get missed
 - this communicates that they are important
- Walk them slowly through **figures and graphs**
 - explain what the axes mean
 - tell them what conclusion they should draw
- Welcome **interruptions**
- Know when to **stop**

Engage with the Audience

- Start from the assumption that people find talks **boring**, and strive to overcome that boredom
- You're allowed to **interact** with the audience or talk directly to specific people
 - they're living, human beings, and you're not a recording
- Ask rhetorical **questions** (or real questions)
- Make **eye contact**
- Model **their perspective** and discuss it in the talk
 - help them understand *why* you're talking about the thing you're talking about
 - anticipate places they'll get stuck understanding concepts
 - anticipate their intuitions (both correct and incorrect)

Speaking

- Speak up
- Speak slowly
- Be **energetic and enthusiastic**
- Use **emphasis**; avoid monotone
- Use **natural**, conversational language
- If you're not a native speaker, practice for one and have them point out mispronunciations
- If you say “**um**” (etc), try replacing with pauses
- **Film yourself** and find out how you look and sound

Overcoming Nervousness

- Be well **practiced**
- If you draw a blank, looking at your slides will help
- Taking a **deep breath** when you need to calm down
- Slow down
- Long **pauses** are OK
- If you must, bring (one page of) notes
- Think about **questions** in advance
 - ...but it's OK not to know the answer (“That’s a great question”)

How to Give an Effective Presentation

1. Decide What to Say

- Plan your material, taking the audience into account
- Make a high-level outline

2. Make Slides

- Make a lower-level outline, emphasizing big ideas
- Clarity is more important than being flashy

3. Practice and Revise

- At least three times, out loud
- Change your slides based on what doesn't work

4. Give the Talk

- Start strong, letting the audience know why they care
- Be engaging, energetic, and easy to listen to

Sources

- <http://www.cs.swarthmore.edu/~newhall/presentation.html>
- <http://www.cs.ubc.ca/~harrison/PowerPoint/Scientific-Presentation-Planning.pdf>
- <http://www.matthewjmilller.net/ramblings/presentation-tips/>
- http://www.physics.mun.ca/~cdeacon/labs/3900/presentation_tips.pdf