Giving Effective Presentations

Kevin Leyton-Brown

Computer Science Department
University of British Columbia

The Four Steps to Success

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

The Four Steps to Success

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DECIDING WHAT TO SAY

What does a proposal look like?

- Motivation

- Related work

- Methodology

- Initial Results

- Impact

What does a proposal look like?

- Motivation
  - what **problem is being addressed** and why is it important?
- Related work
- Methodology
- Initial Results
- Impact

What does a proposal look like?

- Motivation

- Related work
  - what approaches have people **tried already**?
  - why are these **insufficient**?
  - what elements of existing work will you **build on**?

- Methodology

- Initial Results

- Impact

What does a proposal look like?

- Motivation

- Related work

- Methodology
  - what do you **propose to do**?
  - what **technical tools** do you propose to use?

- Initial Results

- Impact

What does a proposal look like?

- Motivation

- Related work

- Methodology (specific to our class)
  - how will you **formally model** your scenario?
  - how would **classical game theory** analyze the question?
  - what important aspects of the problem would be **missed** by the classical analysis?
  - what **behavioral model** will you use?
  - what **data** will you use?

- Initial Results

- Impact

What does a proposal look like?

- Motivation

- Related work

- Methodology

- Initial Results
  - what have you **already learned** through preliminary analysis?
  - how do these findings **support the main thrust** of your proposed work?
  - what **challenges** do you anticipate facing, and what ideas do you have about how to address these?

- Impact

What does a proposal look like?

- Motivation

- Related work

- Methodology

- Initial Results

- Impact

  – what **benefits** would your proposed work bring?

  – what are some potential **downsides**?

  – what avenues will remain for **future work**?

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?
  - examples
  - 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 high-level **outline**
  - follow **proposal outline** unless you have a good reason
  - decide which elements to **emphasize**, which to elide
  - decide how much time to allocate to each section. Then:
    - what should each section's main message be?
    - can you illustrate with an intuitive example, picture, etc?
    - are your most interesting ideas coming through?
    - are you avoiding extraneous details?

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 topic** 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

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?"**
  - **"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

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
  - 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
  - explain *why* you're talking about your topic
  - anticipate places they'll get stuck
  - 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/sound

Overcoming Nervousness

- Be well **practiced**

- If you draw a blank, looking at your slides will help

- Take 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")

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**

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!**
   - At least three times, out loud

4. **Give the Talk**
   - Start strong, letting the audience know why they care
   - Be engaging, energetic, and easy to listen to

Sources

My own experience, plus:

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