A Talk about How to Give a Talk – Part I

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"Logic is everywhere ..."
Overview

Part I  How to conceive and prepare a talk

Part II  How to present the talk
Types of Talks

Lecturing Talks
- **Focus**: Some contents to explain
- **Occasion**: LECTURES
  - Tutorials
  - Seminar Talk
  - Status Talk on Your Work

Advertising Talks
- **Focus**: Your work and you
- **Occasion**: CONFERENCE TALK
  - Seminar Talk
  - Status Talk on Your Work
  - Thesis Defense

I will focus more on Advertising Talks than on Lecturing Talks, because they are more difficult:

You don’t have much time!

Of course, many problems when giving talks are quite general ones:

how to speak, how to handle questions, . . .
Main Message

TELL A STORY

Think of your talk as a Science Story tailored to your Audience and your Goals.

Only present information that is immediately relevant and necessary to your story in view of your audience and your goals.
Goals (of a conference talk)

► TO DO
  ▶ To give your audience an intuitive feeling for your idea (your story)
  ▶ To make them eager to read your paper

► NOT TO DO
  ▶ To tell them all you know about your topic
  ▶ To present all the technical details

► Think of your talk as the story of your research
  NOT primarily as a presentation of facts

► Keep in mind your audience
  If someone remembers only one thing from your talk, what would I like it to be?
Audience

The audience you would like

► Have read all your earlier papers
► Thoroughly understand all the relevant theory of . . .
► Are all eager to hear about the latest developments in your work
► Are fresh and alert

The audience you get

► Have never heard of you (nor of your work)
► Have heard of . . . , but . . .
► Have just listened to an awesome talk and are still left there
► Have just had lunch and are ready for a doze

Your mission is to WAKE THEM UP and make them glad they did
Contents of a SHORT Research Talk

1. **Motivation** (20% of first 10-15 minutes)
   - What is the problem?
   - Why is it an interesting problem?
   
   You have 2 minutes to engage your audience before they start to doze

2. **Your key idea** (80% of first 10-15 minutes)
   - What did I do to solve this problem?
   - Which are your achievements?

3. **There is no real 3 if the entire talk is 10-15 minutes**
   Just very short conclusions and future work
Formal Structure of a Research Talk

- Title
- Introduction: ~ Motivation
- ‘Methods’ – what you did: ~ Your Key Idea
- Results and Discussion: ~ Maybe still Part of Your Key Idea
- Conclusions
Introduction — Present Research Problem

After you’ve introduced yourself ....

... introduce your research problem

► 2–3 slides maximum
► Briefly outline background/justification, area where problem is located
► Identify the research problem
► Whenever possible: short example
► Identify study objectives (no more than 3!)
► State your hypothesis
Your Key Idea

Recall:
If the audience remembers only one thing from your talk, what should it be?

► You must identify a key idea
► Be specific
  Don’t leave your audience to figure it out for themselves.
► Be absolutely specific
  Say “If you remember nothing else, remember this.”
► Organize your talk around your key idea
► Ruthlessly prune material that is irrelevant to this goal
Pruning – Saying Enough Without Saying Too Much

▶ The tension is this:

you need to say enough to convey the essential content of your idea, but you must not overwhelm your audience with too much material.

▶ The best way out:

▷ Treat some aspects in more detail than others.

It may be painful not to talk about the other parts, but it is better than only giving a superficial treatment to everything, or over-running your time.

▷ There may be people in your audience who don’t know the area at all, some overall introduction/motivation is usually essential.

▷ Avoid spending 5-10 minutes on rambling introductory remarks.

▷ Better: Jump straight in with an example which demonstrates the problem you are addressing.

▷ Remember: If you bore your audience in the first few minutes you may never get them back.
Avoid the temptation to conceal problems you know about in your work. Not only is it dishonest: it is also ineffective. A bright audience will find you out.

Furthermore, if you are open about the difficulties, you may find that someone makes a suggestion which turns out to be just what you need. Get your audience to help you do your research!
Examples are Your Main Weapon

► To motivate the work
► To convey the basic intuition
► To illustrate The Key Idea
► To show extreme cases
► To highlight shortcomings

When time is short, omit the general case, not the example.
Omit Technical Details

- Present specific aspects only
- Refer to the paper for the details
- By all means have backup slides to use in response to questions

Avoid the Two Most Common Mistakes in presenting results

- Don’t engage in data dumping!
- Don’t include every result
How to Write Slides – The Title Slide

► **Required:** Title, Authors, Institution(s)

► **Title:** Clear, accurate reflection of content
   Inaccurate title = “false advertising”

► **Optional:** Picture (reflecting aspect of research)
   Picture can make title slide more interesting
   But it might take too much time to explain it
How to Write Slides – General Considerations

Make your talk look professional by being consistent in your slide and figure design.

► Use a the right system for your purpose
  Use a LaTeX based system if you have to print formulas
► Choose right size of font
  Depends on lecture hall, video taping, . . .
► Choose right type of font – prefer sans serif font
► Choose same font for same type of symbol in text and figures/tables
► Choose a dark or light background based on which will display your data most effectively.
  Avoid light text on light backgrounds, or dark text on dark backgrounds.
► Avoid fancy slide templates. It’s just distracting.
► Don’t just copy your research paper onto slides

Run a final spell check
How to Write Slides – Simplify Your Slides

Once you’ve created slides to represent a layout of your talk, go through and refine those slides.

▶ Never put more on a slide than you can explain
▶ Minimize written details in slides.
   Of course, without loosing contents
▶ Avoid sentences.
   Instead, write a short phrase that summarizes the main point.
   You don’t want your audience reading instead of listening to you!
   ▶ Never let formatting be done by the system
   ▶ No hyphenation!
▶ Remove unnecessary details from the figures and tables.

Add Titles to Your Slides

▶ Use a new slide to introduce each major idea.
  Don’t squash many ideas into one slide.
Practice and Test the Presentation

► **Practice your talk** (Maybe: in sections first, then entire talk)
  ▶ Don’t read your talk. Speak free
  ▶ BUT: DON’T memorize your talk!

► **Stay within Allotted Time**
  Prepare talk that is a few minutes shorter than the time slot
  But: you might speak faster than when just training

► **Mimic the real event:**
  ▶ Practice by saying the words out loud!
  ▶ If possible, practice talk in room/lecture hall where you’ll actually give it
  ▶ Ask colleagues to attend and to give you feedback
  ▶ Practice answering questions with your mock audience

► **Allow 2 days after each practice talk to implement changes.**

► **Videotape your talk**
Conclusion

TELL A STORY

FOCUS ON YOUR KEY IDEA