Oral Communication: 
Giving Effective Oral Presentations

Outline

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Purpose of an oral presentation

Main goals: Same as written communication
- Communicate the results of research, data analysis
- Inform, convince
- Instruction

Main principles: Same as written communication
- Accessibility
- Logical organization
- Clarity
- “Tell a story”

Only harder!
- Time restriction
- Attention span, concentration of audience
- No chance to revise
Purpose of an oral presentation

Differences from a paper:

1. Audience does not have luxury of reading references beforehand (or stopping you while they read them!)
2. Audience wants to be informed about main points – do they want to know more?
3. Interested audience members can get the full story from your paper later!

How to structure an oral presentation

A basic “recipe:” For statistical research presentations

1. Abstract
2. Title slide
3. Outline
4. Motivating example
5. Statistical framework
6. Main results
7. Simulation results
8. Example, revisited
9. Discussion

How to structure an oral presentation

Abstract: Same as for journal articles

1. A brief summary of the scope of what is to be presented, without details
2. Should give potential audience enough information to determine whether the content is of interest

Required for:

1. Presentations in academia, industry, and government, e.g. seminars, meetings with administration, public forum
2. Presentations at statistical meetings – will appear in the meeting program

Title slide:

1. Short title, to the point
2. Your name, affiliation, e-mail/web address

1. Outline: Road map
2. Tell your audience what to expect
3. Bullets, numbers
How to structure an oral presentation

2. Motivating example:
   6 Puts the work to come in context
   6 Defines the problem
   6 Makes the problem accessible
   6 Warning – give only relevant details, use only a subset of a large dataset to reduce complexity
   6 Plots, graphs vs. tables of observations

3. Statistical framework:
   6 Necessary background – but don’t just quote papers
   6 Set up formal models, notation
   6 As few symbols as possible! (Your audience will not be able to remember a lot of notation)
   6 Relate notation to motivating example

4. Main results:
   6 Outline key steps; lead your audience through your reasoning
   6 But leave out technicalities, mathematical derivations; focus on the main points
   6 No proofs, unless the point of your presentation is to demonstrate a proof
   6 Highlight and interpret the important results

5. Simulation results: If you show these
   6 Avoid tables of zillions of numbers
   6 Only show an “interesting” subset of all results you have
   6 Highlight key columns, entries with color or special type to draw attention
   6 Graphical display of results may be easier to digest
How to structure an oral presentation

6. Example, revisited:
   - Remind your audience of the objective of analysis
   - Pictures!
   - Tables containing only most important results that make your point
   - Explain what the results mean in terms of the subject matter

7. Discussion:
   - Restate the purpose of your presentation
   - Review the key findings
   - Discuss aspects that need further study
   - Software, paper availability

Giving good oral presentations

Similar to written work: But with some differences
   - Organization and logical flow!
   - Content and accessibility
     - Keep things at a level your audience will be able to follow
     - Do not try to include everything you would in a paper

Delivery and clarity
   - Speak clearly, audibly
   - Pace – not too fast/slow, pause slightly after “hard” parts to allow audience chance to think
   - Repeat difficult points more than once
Giving good oral presentations

**Visual aids (e.g. slides):**

1. Large characters, visible from afar
2. Avoid cluttered slides
3. Avoid need to define excessive notation
4. Sparse slides (e.g. containing just a key result or equation) may be most effective
5. Lots of figures, plots!
6. Use color or other highlighting to draw attention
7. Go easy on cutesy special effects

**Timing:**

8. How much you present depends on how much time you’ve got
9. 15 minute contributed talk at a statistical meeting
10. 45-50 minute seminar
11. Keep within the time limit!
12. If you have to rush, you’re trying to say too much!
13. **Practice!**

**Handouts:**

14. Often a good idea (especially at preliminary oral, small research seminar, job interview)
15. Can be distracting with a big crowds (paper rustling)
16. Slides should be small but readable (e.g., 6-up) to minimize amount of paper (and hence rustling)

**Concluding remarks:**

17. A good speaking style can be **learned – practice!**
18. Good visual aids are essential!
19. Remember, you know more about the subject of your talk than your audience (so no need to be nervous)!