Effective Presentations

(courtesy of Katinka Csigi)

Boston University Department of Chemistry
Topics

- Oral Communication Basics
- Preparation and Delivery
- Designing Effective Slides
- Wrap-Up
Oral Communication Basics
Challenges

• Different from written communication
• Get three to five points across
  ❖ 20 to 30 minutes
  ❖ 2 minutes/side = 10 to 15 slides
• Repeat key insights
  ❖ Tell them what you are going to tell them
  ❖ Tell them
  ❖ Tell them what you told them
Science Communication Goals

• Tell your research “story” compellingly
  ❖ Introduction
  ❖ Methods
  ❖ Results
  ❖ Conclusion/Summary

• Give a clear picture of your contribution

• Get audience to read your paper!
Benefits of Communicating

- Great training for your discipline
- Questions can provide insights
- Build your reputation among your peers
Preparation and Delivery
Preparation and Delivery

• Plan your presentation carefully
  ❖ Persuade?
  ❖ Inform?
• Know your audience
  ❖ Who are they?
  ❖ Expertise level?
  ❖ What do they expect to get out of your talk?
• Practice, use “buddy system,” take advice
• Check out equipment before your talk
• Speak comfortably, clearly
• Talk to your audience, not to the screen
• Enjoy your presentation
Slide “Budget”

• Overview (1 slide, 2 to 5 mins)
• Background
  – Motivation/problem statement (1-2 slides, 5 mins)
  – Related work (1 slide, 2 mins)
• Methods (1 slide, 2 mins)
• Results (4 to 6 slides, 8 to 10 mins)
• Summary (1 slide, 1 min)
• Future work (1 slide?, 1 min)
• Acknowledgments (1 slide, <1 min)
• Thank the audience for their attention and questions
Engage Your Audience

✓ Introduce yourself
✓ Smile and convey pleasure at addressing them
✓ Make eye contact throughout the room
✓ Describe structure of your talk
✓ Use the right language ("pitch" level correctly)
✓ Maintain right pace
?
Make presentation graphic rich
Use Graphics Frequently
Using figures from another

Figure from Kisker, et al. Structure, 11(10), 2003, 1251-1263, used without permission.
Kisker, et al. Structure, 11(10), 2003, 1251-1263,
A Note on Laser Pointers…

- Use lasers sparingly
- Guide the audience
- Avoid laser light shows
Preparing Slides
Effective Slides

• Include only pertinent information
• Slide contents should be self evident
• Avoid mega-data slides
• Seven words a line, seven lines a slide
Catalytic voltammetry of NarGHI...

Potential (V vs SHE)

Current (µA), or Enzymatic reduction rate

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(an ineffective slide)
Typical data are at right, which shows that at low amplitude, and moderate frequencies (up to 400Hz) two distinct features are observed in the forward and backward voltammograms.

The films are not intense, and rely upon 0 °C temperature for stability.

Both features appear in the forward and backward scans, and both have a separation of approximately 2x the amplitude.
Two features:
• reversible
• separated in E
• $\Delta E_{\text{peak}} \sim 2 \times \text{Amp}$
Graphics

- Present information graphically
- Graphics need to be big and bold
- No more than two graphics per slide
Graphs

- Show relationships, comparisons, and change
- Graphs should not show too much detail
- Different graphs serve different purposes
  - Pie chart = whole/component parts
  - Bar graph = relationships
  - Line graphs = trends
Arrangement

• English is read left to right
• Eyes land in optical center of the screen
• Create visual balance
• Do not crowd the information
• Always leave space between lines of type
PowerPoint Layout Options

- Title Slide
- Bulleted List
- 2 Column Text
- Table
- Text & Picture
- Picture & Text
- Large Picture
- Picture
- Text & Chart
- Chart & Text
- Organization Chart
- Chart
- Text & Media Clip
- Media Clip & Text
- Picture over Text
- Text over Picture
- Text & Clip Art
- Clip Art & Text
- Title Only
- Blank
- Text & 2 Pictures
- 2 Pictures & Text
- 2 Pictures over Text
- 4 Pictures
Images from Department
Sept. 10 Barbecue

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Animation

- Fantastically powerful
- But
- Can be
- Overused
PowerPoint Templates

- Use system templates for your slides **judiciously!**
- Templates provide design
- Standardize position, colors, style
- Incorporating logo into template
- Logo in bottom right corner
- Make your own “master slide”
Colors

- Limit use of colors
  
  Some colors just do not work!

- Use colors that contrast

- Beware of certain combinations

- Dark background, light colors?
White on Blue

• Avoid red with this combination!
• Very attractive
• But does it work for science presentations?
Font Basics

- Font size communicates importance
- Font size should range between 18 - 48
- Illegible fonts detract from message
- Use system fonts
  - Arial
  - Times
  - Helvetica
# Font Comparison

<table>
<thead>
<tr>
<th>Arial (Sans Serif)</th>
<th>Times (Serif)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 Point</td>
<td>18 Point</td>
</tr>
<tr>
<td>28 Point</td>
<td>28 Point</td>
</tr>
<tr>
<td>32 Point</td>
<td>32 Point</td>
</tr>
<tr>
<td>44 Point</td>
<td>44 Point</td>
</tr>
<tr>
<td>48 Point</td>
<td>48 Point</td>
</tr>
</tbody>
</table>
Type Basics

• ALL CAPITAL LETTERS ARE HARD TO READ

• Use uppercase letters for first letter

• Avoid abbreviations

• Omit punctuation marks

• Proof, proof, proff (sic)
Wrap-Up
Presentation Wrap-up

• Respect your audience, yourself, and your work
• Keep it simple, clear, consistent, logical
• Learn PowerPoint features (templates, layout, “master slide”)
• Recognize that communicating your science is highly critical
• **Seek every opportunity to make presentations!**