Effective Scientific Presentations

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UTH ealth
What we will cover

- Goals of presentation
- Length and style tips
- Effective communication
- Power point do’s and don’ts
- Body language tips and appearance

Read more: http://www.nydailynews.com/sports/soccer/us-portugal-match-article-1.1841288#ixzz35avzXg4t
What is the goal of presentation?

- Report your data
- Convince your audience
- Entertain your audience
- Make the take home message memorable
What makes it difficult for audience to follow you?

- Only one chance to hear the information
- The audience doesn’t know ALL the background
- The audience is at your mercy to tell the story
Communication is key

- Put yourself in their shoes—what do they need to know to understand your data?
- Be enthusiastic about your data—this will trickle down to your audience
- You can capture your audience by being clear and concise with a side of enthusiasm
It’s faith in something and enthusiasm for something that makes a life worth living.
Specifics of the talk

- How long is the talk?
- Who is the audience?
- What idea/data is most important to convey?
Specifics of the talk

• Rule of thumb—1-2 slides per minute of talk

• A 10 minute talk should have NO MORE than 20 slides!!!!!! Preferably less than 15.

• A 60 minute talk should have no more than 75 slides
Scientific talk preparation

- In a 10-12 minute talk, need to get to the data quickly
- Must provide background information
- Audience needs to understand purpose of work
- Big picture—what is question is/hypothesis?
Why did you do this work?

- What is the big picture?

- Why is this work important?

- If you don’t tell the audience this—they will not appreciate your data
Make an outline

- What facts does the audience need to know?
- How is my work important to this knowledge?
- What are my methods?
- What is the most important data to show?
- What are my conclusions?
- How does my data fit in the big picture?
BIGGEST MISTAKE!!!!

- Show too much data in too little time
- In a 10-12 minute talk, show 5 slides of data not 10
- This is about communication, not befuddlement
- Stories from my own experience
One Instructive presentation

- Fifty slides for a 15 minute presentation—data slide every 10-20 seconds, each data slide was covered with data and you couldn’t actually see the data (emperor has no clothes)
- No conclusion slide—just ended in a flurry—ran out of time!

- Because of the 50 slides and 15 minutes, the speaker talked so fast it was hard to follow—ended without knowing what the data was or what it meant—except there was a lot of it.

- Take home message to me—NEVER do this!!!
One Instructive presentation

- Fifty slides for a 15 minute presentation
- Data every 10-20 seconds
- Full data slides
- No conclusion slide—ran out of time

- Speaker was speed talker with a data surplus

- Take home message to me—NEVER do this!!!
Another instructive presentation

- Lone speaker at podium at noon—HIV epidemiology.
- No slides, but words from a typed piece of paper.
- Careful crafting of words conjure pictures in my head.

- When I next looked down, my watch said 1:10

- Take home to me: words and delivery matter
Effective communication strategies

• PRACTICE!!!!! Winging it doesn’t work!!!

• Look at your audience.
• Use the fewest words possible
• Speak slowly and clearly—avoid Uuuhhs and grunts

• Imagine telling a story--engage the audience.
Alas, I am nervous

- Sure, you are!

- But, you know your data better than anyone!

- Take a deep breath.
- Memorize the first few lines to start.
- Words and data will flow.
take a deep breath.
Showmanship

• Make eye contact around the room
• Open your body to receive their interest
• Sense of humor—take your work, not yourself seriously.
• Be yourself! Don’t force jokes, if that isn’t your style

• Answer questions non defensively:
  
  Say thanks for the interesting or insightful question

• Say you don’t know something, if you don’t know
Memorize or not?

- Depends on you—may need to memorize
- Nothing wrong with reading—except harder to engage
- Need strong command of material and the pace.
- Nervous people speed up—reduces effectiveness
- PRACTICE!!!! Depends on your level—2-5 times
Presentation basics

- Two to three overview slides
- One methods slides
- 3-5 slides of data
- Conclusions/model slide
- Acknowledgements

- This is easily 12-15 slides!
What to include in overview

- Current understanding of the topic—a graphic is good.
- What the hypothesis is and importance of testing.
- Use Bullet points to convey ideas about the topic.
- Avoid complicated graphics—where the audience has to go here and there—too confusing and takes time.
What to include about methods

- A single methods slide for a 10-12 minute talk.

- Cover highlights and anything that might not be obvious—or a new technique.

- A cartoon of the method may be informative.
What data to include

- Most important data to make your points.
- Will not be able to cover **all** your data.
- Try to make each slide come from the previous one.
- We found this, so it raised the next question—which is this and here is what we found and on to the next slide.
Conclusions

- Bullet points for these and they should match the data.
- Can say “data not shown” but it must be additive data not necessary data.
- Be sure to put implications of your data and next steps.
Acknowledgements

- Collaborators
- Funding
- Anything else that is appropriate
Visuals

- Humans like color—but you can overdo it---you can spend so much time with fancy features that you don’t tell the story in a compelling way.

- Channel Steve Jobs
Lessons from Steve Jobs

- Simple can be harder than complex.

- You have to work hard to get your thinking clean to make it simple

- Design is not just what it looks like. Design is how it works.
Steve Jobs approach to presentations

- Tell a complex story in simple, concise words and pictures.
- Consider the time, be selective about what to include.
- Design affects impact of the presentation.
- Design affects how the world sees your data.
Power point tips

• Use bullet points for text—4-6 per slide.

• Make text large!!! To see at back of room (30 pt).

• Strong contrast between background and text.

• Graphics to illustrate your points, but not too many!

• Easy on animation—distracting in a brief talk.
Power point—pros and cons

- Easy to do and can be effective at selling your story
- Its visual—humans are visual
- Easy to overdo so the story gets lost
- Take time to explain your data, not polish the power point.
- Without a good presenter, the power point is useless.
I am writing down everything I could possibly say about this slide

Resulting in me reading all the text out loud
- But hey, that also means I do not have to make any contact whatsoever with my audience.
  - Yippee!
  - Shit, is my fly open? I feel a breeze
- Why is that guy yawning over there?
- I just love the Arial font, don’t you?
- I’m glad my secretary found this standard background, it is just so pretty to look at.

Could this possible get more lame?
- No, probably not
- I should insert a joke, but I wouldn’t know where to find one on the internet
- If I bore everyone long enough, there will be no room for questions
  - The idea of interaction just made me pee in my pants

I hope no one notices I actually wish I was dead
I’ve just forgotten my name...
Oh well, only 50 more minutes of this
Buying a New Suit
Overwhelming Pictures

- Use pictures, but don’t let them use you.
- Simple slides! Too much is diversion.
- Pictures increase storage needed.
- Each slide should no more than two.
Chilean Exports

- Fresh fruit leads Chile's export mix - Chile emerges as major supplier of fresh fruit to world market due to ample natural resources, consumer demand for fresh fruit during winter season in U.S. and Europe, and incentives in agricultural policies of Chilean government, encouraging trend toward diversification of exports and development of nontraditional crops - U.S. Dept. of Agriculture, Economic Research Service Report
- Chile is among the developing economies taking advantage of these trends, pursuing a free market economy. This has allowed for diversification through the expansion of fruit production for export, especially to the U.S. and Western Europe. Chile has successfully diversified its agricultural sector to the extent that it is now a major fruit exporting nation. Many countries view Chile's diversification of agriculture as a model to be followed.
- Meanwhile, the U.S. remains the largest single market for Chile's fruit exports. However, increasing demand from the EC and Central and East European countries combined may eventually surpass exports to the U.S., spurring further growth in Chile's exports.
- If you've read this far, your eyes probably hurt and you've been reading this tedious long-winded text instead of listening to me. I'm insulted - can't you see I'm doing a presentation up here? Look at me! Congratulations, however, on having such good eyesight.
Chilean Fresh Fruit exports

- Chilean fresh fruit exports occur primarily to the US and European markets in winter months.

- Fruit diversification has helped develop the market.

- Future growth likely from European markets.

- What is the point?—Lead the audience?
Too Much Text, and Font too small

• Don’t put large blocks of text in your presentation.

• Emphasize main points.

• The “Six-by-Six” Rule—6 bullet points/6 words

• Use pictures- PowerPoint is multimedia!

• Use a large font...at least 30-point or more.
Beginner Motorcycles

• My personal favorite: the Suzuki Savage
• Light weight (~380lbs)
• Adequate power (650cc engine)
• Low seat height fits most riders
Colors are good—but but discretion!

- Avoid loud, garish colors.
- Dark text on light background is best.
- Avoid dark text colors that fade into background.
- Avoid certain color combinations: Red and Green/Blue and Yellow
More Presentation tips

- Talk to your audience, not the slides.
- Don’t just read it—the audience can read it.
- Don’t apologize for presentation shortcomings.
- Leave time for questions.
More Presentation tips

- Check grammar! Misspellings should be caught before the presentation!!!
- Avoid “slide rush”.
- Cite sources on each slide or at the end.
- KEEP IT SIMPLE! Power point is a tool!
Appearance—assume it matters

- Dress conservatively—no cleavage, no odd colors.

- Solids are good—no distracting patterns.

- Women have more choices for individual style—red is good for females—it speaks power. Forget provocative!

- Males can individualize their appearance with an appealing tie against a solid color background.
Speaking voice also matters

- Speak up and enunciate words.
- If you have an accent—very important to slow down—also may need accent reduction training.
- Don’t make your voice go up at the end of sentences—makes you sound tentative and unsure.
- PRACTICE!!!!
Courage is the most important of all the virtues, because without courage you can't practice any other virtue consistently. You can practice any virtue erratically, but nothing consistently without courage.
Ralph Waldo Emerson

- All the great speakers were bad speakers at first