

Engineering an exceptional talk: summary points

The big picture

To give a great presentation, the key focus must be the **audience**, not you. Your dual goal is to interest and educate those in attendance. You want to tell a complete story that's interesting to *them*, and you should treat your slides as an aid to your narrative, not the story itself.

Your audience and your story

Think of yourself as a teacher, storyteller, and a tour guide for the audience. Your roles are to:

- **excite** the audience for your topic
- **educate** the audience by organizing existing and your work into a cohesive picture
- **provide a critical eye and filter** for the information you are presenting
- **inspire additional interest** and inquiries in your work

Understand how your audience learns, which is largely through visuals and, secondarily, your oral speech. Audiences generally only retain a small fraction of what they see and hear. The implications for your talk are the following:

- **Be as simple, clear, and concise as possible**, in both slides and your narrative. It is harder to err by being too simple than too confusing, and often you should simplify beyond your initial comfort level.
- Aim to convey just **2-3 main points**, and reinforce these throughout the presentation. These are the big ideas that you want your audience to remember, if nothing else.
- Your slides should **complement** and not compete with or repeat your narrative.

Always adjust your talk to the particular audience at hand. What are your audience members' expertise in your topic, and how diverse are they? Above all, what about your work will *interest* them? **Say why they care, not what you did.**

Shape your presentation into an engaging **story**: set up a mystery, offer clues, build suspense with past successes and failures, show how you saved the day, give a surprise ending, etc.

Your slides

Your slides should complement your story and never confuse the audience. Your primary goal should be to **streamline and simplify**:

- One idea per slide.
- Use white space. Eliminate unnecessary aspects such as decorations, cute clip art, backgrounds, and nonessential animations.
- Maximize the "information to ink" ratio. Constantly challenge yourself to replace text with informative pictures, graphs, and diagrams. Strive to reduce text as much as possible and to eliminate bulleted lists.
- Always avoid confusing elements like jargon, abbreviations, small text, or fuzzy graphics. These will distract your audience from the story you are telling.
- Swap generic slide titles like "Results" for informative statements like "Hydrophobic interactions dominate binding."
- Curate your information. Prune graphs, tables, & diagrams of unnecessary elements ("chartjunk"). Your audience has a very short period of time to interpret these.

Here are some other **logistical tips** for putting together slides:

- A good pace is slightly under 1 slide/minute, or about 40 slides for a 50 minute talk.
- Dark slide backgrounds are often less easy to read and less stimulating than white ones.
- Green elements tend to project poorly and often show up too light to see.
- Use plain, consistent fonts with just a few style, color, and size changes to highlight key concepts. Avoid difficult-to-read all-caps, script, and cartoony or informal fonts.

You

Everybody gets nervous. Here are some strategies that will help you reduce your fears:

- Give yourself plenty of time to outline, prepare, and refine your story and slides, to ensure a continuous narrative that is intuitive, especially to you.
- Practice your talk alone and in front of peers. Initially you may be tempted to script your narrative, but as you gain more practice, challenge yourself only to outline your points. Encourage your practice audiences to interrupt you with questions.
- Become familiar with the presentation room. Visit the facility during off-hours to become comfortable with the space and to test your equipment to avoid stressful tech issues.
- Focus on educating, not on being evaluated. Remember that you are the teacher, the one with the information that the audience came to hear.

Engage an audience using good **etiquette** and a **conversational, educational narrative style**.

- Thank your introducer at the beginning of the talk, and thank the audience at the end.
- Strive to make eye contact with the audience more than with your slides.
- Stand in a visible position. You can move around a little, but avoid distracting pacing.
- If you're not using a microphone, speak loudly and project. More often than not, you are probably speaking too softly.
- Always explain what is on your slides. For example, point out graph axes and contents before describing results. If you don't have time to explain it, it shouldn't be there.
- Avoid using "um" and "uh". Practice simply replacing these with pauses.
- Be conversational, not robotic. Vary your intonation, speed, and eye contact, and use nonverbal cues appropriately. Your energy level affects your audience's.
- Smile. Be enthusiastic and, importantly, be confident. This helps your audience trust you and focus on the story, not you.

Once you lose an audience, they're gone. **Avoid these pitfalls** that risk audience revolt:

- Reading text on the slide can seem pedantic, insulting, or a waste of time.
- Getting off topic or belaboring minor details can annoy, bore, or confuse.
- Going over your allotted time is simply rude and disrespectful of your audience's time.

Answering questions at the end of your talk (or during) is your opportunity to further engage the audience.

- Avoid over-answering that will reduce time for other questions. Be to the point. Seek clarifications from the asker if necessary.
- Never feign knowledge. You don't have to admit "I don't know," but you can say "I'll have to check on that and get back to you." And then always make sure to follow up.
- Treat all questions and questioners with the same respect. Don't belittle a question that seems naïve or redundant to you, and don't intimate that the asker wasn't listening.
- Manage persistent, aggressive questioners with statements like, "These are some good points, but perhaps we should discuss the fine details further in person afterwards."

Resources

Edward Tufte, *The Visual Display of Quantitative Information* (Graphics Press, 1983).

Michael Alley, *The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid* (Springer, 2002).

Robert Anholt, *Dazzle 'Em With Style: The Art of Oral Scientific Presentation* (Academic Press, 2005).

Robert Bly, "Give memorable presentations," *Chem. Eng. Progress* 99 (2003).

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Feel weighed down by talks lately? Looking for a svelte style?

Try the PowerPoint Diet – a simple four-point plan!

You'll be amazed how good you'll look.

The Rules

- 1) Serve only why they care, not what you did
- 2) Text in moderation: meaty slide titles + a maximum of 20 additional words per slide
- 3) Plenty of nutritious figures, diagrams, movies, and other visual explanations, but just one idea per slide
- 4) Avoid empty calories: decorative junk like templates, clipart, and needless animations

*Notes: Small citations are nearly calorie-free
Bullets may cause drowsiness or high blood pressure*

Getting started on the diet

- 1) *Fresh ingredients*: Begin with blank slides.
- 2) *Menu planning*: Jot down the key idea of each slide.
- 3) *Food pairing*: What data or visual will best sell that idea?
- 4) *Cooking*: Make it happen through PowerPoint sketching, Google image search, Excel, any tool in the kitchen.