Powerful Presentations

Duke AHEAD Communication Symposium

Richard Chung, MD (richard.chung@duke.edu)

Designing powerful presentations takes a lot of time. It may not be possible to commit the time and energy necessary to design every single presentation to a very high standard, but if you are giving a particularly important talk, or there is a talk that you give repeatedly that is central to your professional expertise and passions, it makes sense to really invest the time once and for all and reap the benefits over and over again each time you present it.

BASIC CONCEPTS

1. Have a clear goal and knowledge of the audience—condense the point into one sentence, acknowledge who your audience is and what you will need to do to move them forward in understanding, action, or both. If you can't distill the purpose of your talk into one sentence, you may not have a firm enough grasp of your objective heading into the talk.

2. Engage the audience and convey the importance of the material— help the audience recognize why it is worth paying attention. How will their practice improve? How will their lives be better? Who will they be able to help? Let your passion for the subject show.

3. Array the presentation materials in a manner that optimizes communication—spend the time to create slides which enhance rather than obscure your message. Recognize that the brain takes material in better if you are thoughtful about how you present it.

4. Create opportunities for active learning—people learn best when they engage with material in multiple different ways. Allow them to think about the problem before presenting relevant information, present your information, let them apply the knowledge they have gained, and then consider how to apply the knowledge to other scenarios.

STORYTELLING

Since ancient times, stories have been used to convey information intelligibly and memorably. From an early age, children learn through stories, even prior to being literate themselves.

You can weave a single unifying story throughout a presentation and/or use brief anecdotes to punctuate specific important points.

Juries are an example of how a unifying story can tie together a wide range of details into a form that is intelligible, memorable, and actionable.

Stories also invoke feelings and the heart. People do not learn, decide, or act solely based on facts. Feelings and the heart matter substantially, even in academic contexts.

Nancy Duarte's story structure:
https://presentationdesignformeded.files.wordpress.com/2013/03/screen-shot-2013-03-24-at-2-50-13-am.png

PRINCIPLES OF MULTIMEDIA EDUCATION

Effectively using multimedia tools requires understanding how the brain takes in information and designing slides accordingly. There is evidence from studies of undergraduates (Catherine Overson, "Applying Multimedia Principles to Slide Shows for Academic Presentation" in Applying Science of Learning in Education, 2013) and medical students (Issa et al 2011) that simply changing the slide layout can impact uptake of material. Much of these ideas are based on work done by Richard Mayer at UCSB.

Mayer's Cognitive Theory of Multimedia Learning is based on three assumptions
o Dual Channel Assumption—people can take in material through verbal or visual channels which run in parallel.
o Limited Capacity Assumption—each of these channels can be overwhelmed.
o Active Processing Assumption—learning is hard and takes lots of cognitive processing; your job as presenter is to make it easy

Three Key Tasks
1. Managing Essential Processing (your core material you want the audience to take in)
- Modality-speak words rather than writing them on a slide when possible
- Pre-training- present definitions or foundational concepts early/separately so learners can focus on the task of learning concepts when it is time
- Segmenting- break material into learner-paced parts OR be aware of giving enough time to finish one concept before moving onto the next
2. Reduce Extraneous Processing (cut out sources of extra processing load)
- Coherence-remove extraneous material
- Signaling-underscore and highlight essential material
- Redundancy-avoid having graphics, narration and text about the graphics
- Spatial contiguity-printed words should be near a corresponding graphic
- Temporal contiguity-spoken words at same time as corresponding graphics
3. Fostering Generative Processing
- Personalization-conversational rather than formal style, use 1st or 2nd person
- Embodiment- be human with human emotions, gestures, etc
- Voice—speak warmly, confidently, and pleasantly, NOT mechanistically or simply

reading text

Key references:

o Richard Mayer and Roxana Moreno "Nine Ways to Reduce Cognitive Load in Multimedia Learning" *Educational Psychologist* 43-52 2003
o Richard Mayer "Research-Based Principles for Designing Multimedia Instruction" in *Applying Science of Learning in Education*, 2013
o Richard Mayer "Multimedia Learning" (2nd edition) Cambridge University Press, 2009
o Jared Horvath "The Neuroscience of Powerpoint" *Mind, Brain and Education* pg 137-143, 2014

SLIDE DESIGN RULES OF THUMB

1. One idea per slide – use progressive disclosure

2. Use fewer words – the audience reads faster than you speak

3. Create a consistent look and feel – like a jazz musician riffing
   - Typography – font, size, color, weight, position
        http://www.fontgarden.com.
        http://www.fontsquirrel.com/
        http://thenounproject.com/
   - Color
        http://www.colourlovers.com
        http://www.colorschemedesigner.com/
        http://www.colorhunter.com/
        https://color.adobe.com

4. Use photos that enhance meaning
   - Think communication, not decoration
   - Just because it is on Google Images doesn't mean it isn't copyrighted and can be used freely. Google Images can filter your search to only find images that are marked as free to use without restrictions.
   - Use creative commons photos according to usage restrictions (can be used for free if cited appropriately and not used for commercial purposes)
        http://flickr.com/creativecommons
        http://compfight.com/
        http://creativecommons.org
   - Other free sites
        https://unsplash.com/
        https://pxhere.com/
   - Sometimes paying for a photo is worth it if you will use the photo thoroughly
        http://www.istockphoto.com
        http://www.everystockphoto.com/
        http://fotolia.com

5. Keep it simple

But what about scientific slides/graph/figures?
- Highlight what is important. Use a declarative phrase at the top to drive home the key point.
- These sites are helpful for making attractive and clear graphs/charts:
    www.amcharts.com
    labs.juiceanalytics.com/chartchooser/index.html

PUBLIC SPEAKING

Be passionate – personal passion and import can overcome nerves to a great extent.
Prepare – internalize until your content is reflexive. Then, in the moment, you can be yourself and feed off of the importance of your message.
Know that some measure of anxiety is actually helpful – Noa Kageyama (Julliard professor and psychologist)

OTHER RESOURCES

Even a Geek Can Speak
The Visual Display of Quantitative Information (2nd edition)
Envisioning Information
Visual Explanations
The Back of the Napkin (Expanded Edition): Solving Problems and Selling Ideas with Pictures
Show and Tell: How Everybody Can Make Extraordinary Presentations
https://presentationmagic.com
http://www.presentationzen.com/presentationzen/
http://www.duarte.com/book/slideology/