Using PowerPoint for Better Learning

Tennessee Teaching and Learning Center

“How To” Pedagogies #5

HOW TO PROMOTE LEARNING IN PRESENTATIONS: KOSSLYN’S PSYCHOLOGICAL PRINCIPLES

1. Be relevant without overloading students; connect to their prior knowledge.

2. Be salient and use graphic differences intentionally in your presentation materials. “We cannot help being drawn to large differences in perceptible qualities...Salient stimuli are those that are clearly different from surrounding stimuli” (Kosslyn). Use large text, bright colors, and bold typeface to highlight important information.

3. Differences direct our attention; indiscernible elements do not. Make differences perceivable and evident.

4. Group items into units for “perceptual organization,” so that information is memorable and understandable.

5. Promote comprehension by making the message and the form compatible. This is a cognitive version of ‘form and function’ movement.

6. Any changes in graphic design should point out information—our brains expect that changes carry meaning.

7. Too much information impedes our ability to process information: “people have limited capacity to retain and process information.”

USING PRESENTATION MATERIAL

Follow the RULE OF THREE—no more than three colors, three typeface styles, three groups, three bullet points (four at most), three lines of text. Keep design principles at a minimum.

Be PURPOSEFUL in your use of graphic design elements. Consider emphasis, clarity, key points, important phrases, and the impact of visuals in your presentation. Create a logical flow through a clear purpose.

Emphasize WHITE SPACE on the slide. As a design element, having enough empty space is crucial for visual contrast. A white background provides a key contrast to dark typeface on a presentation slide. Blank areas on the slide contrast with important text or images.

Follow principles of universal design. Colors and movement can be very distracting to all of us but more so to those with even minimal disability. Any movement and sound in a presentation should be there for a content-related purpose. Make your slides accessible to all learners!

Avoid decoration. Decorative and graphically ‘busy’ backgrounds can be highly distracting, since they present unnecessary stimuli that the viewer must process in addition to your text and images.

The “How To” pedagogy series are quick reference pages that define and describe active learning methods to increase student engagement. Each handout provides basic information and references to get you started.
Students DO NOT like:

- Wordy slides
- Clip art
- Movement
- Very colorful templates

Students DO like:

- Graphs that increase understanding
- Bulleted lists to help them organize ideas
- Verbal explanations of pictures / graphs

_N = 453 students at Muhlenburg College, Study conducted by Laura Edelman and Kathleen Harring_

**EXAMPLE OF VISUAL IMPACT**

### Water Pollution

- Pollutants degrade water quality
- Judged from public health or ecological view
- Substances that in excess are harmful to desirable living organisms
- Example: hog farms in NC and hurricane Floyd
  - 38 pig lagoons flooded out
  - 30,000 hogs, 2 million chicken and 735,000 turkeys died

**VS.**

**The Effects and Implications of Water Pollution**

Contact the Tenn TLC for more information by calling 974-3807 or by email tenntlc@utk.edu. Visit our site [http://tenntlc.utk.edu](http://tenntlc.utk.edu) and follow our blog [http://tenntlc.blogspot.com](http://tenntlc.blogspot.com) for publications and faculty development information!