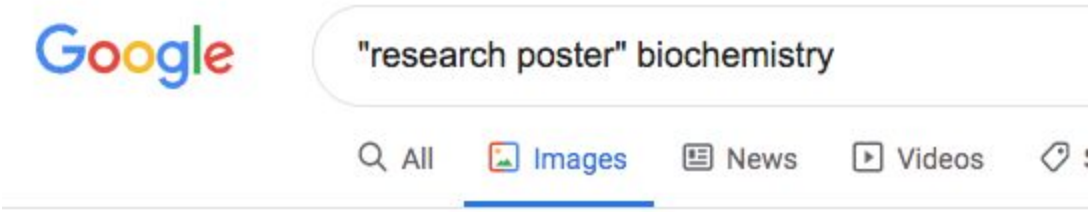
Learning the Basics of Visual Design for Research Presentations

By Jessica Kem, The Writing Center, jkem@amherst.edu

You can learn a bit about effective visual design in scientific research presentations by looking at research posters and critically analyzing their design.

1. Do a quick internet search for “research poster” and your field. E.g.:



   Choose a poster from the search results; it can be at random, or you can narrow your search to a topic you’re familiar with.

2. Open the image and notice your first impression. Respond to the following questions:
   a. What is your first impression of this poster?
   b. Would you stop to read more if you found this poster on display among dozens of others, and why?
   c. If you think you would pass it by, why?

3. After noting your first impression, explore the poster a little further to better understand what design elements created that first impression, and how the design allows you to make sense of its content. Your overarching questions should be:
   a. What makes this poster effective?
   b. What detracts from its effectiveness?
   c. How would you revise it to make it more effective?

   The sub-questions below will allow you to specify the design choices that make the poster effective or not:
   - **Navigation**: What appears to be **the path through the poster’s information**, and how does it guide you?
   - **Design**: Pay attention to the use of color, line, space, and type.

- Is the poster **visually appealing**?
- Which design features appear to be **functional** as well as aesthetic? (e.g., suggesting navigation, structure, emphasis)?
- **Content**: How well does the poster **communicate meaning**?
- What is the **apparent aim** of this poster?
- Can you **digest this level of information** in about 5 minutes? Do you want more or less information?
- Is the **text** written to be easily read in a noisy, crowded conference hall? Consider:
    - vocabulary
    - sentence syntax
    - bullet points, paragraphs, and white space
- **Images**: Are they meaningful or decorative?
- **Charts, tables, graphs**: Are they readable? Adequately labeled? Is significant information easy to identify? Would you suggest presenting information in another form?

4. Create a list of 5-8 do's and don'ts for visual design of scientific research information.

Now that you have developed your own sense of visual design criteria for scientific research presentations, you might deepen your understanding by reviewing any of these resources:

Designing Figures for your Presentation

- Ten Simple Rules for Better Figures (Nicolas P. Rougier, Michael Droettboom, and Philip E. Bourne, *PLOS Computational Biology* 10, no. 9 (2014)
- A Brief Guide to Designing Effective Figures for the Scientific Paper.(Marco Rolandi, Karen Cheng, and Sarah Pérez-Kriz, *Advanced Materials* 23, no. 38 (2011).

Designing PowerPoint Presentations

- PowerPoint Quick Start (Online Writing Lab, Purdue Univ.)
- Death by PowerPoint (Alexei Kapterev)

Designing Research Poster Presentations

- A Guide to Designing a Poster (The Cain Project in Engineering and Professional Communication, Rice Univ.)
- Creating a Poster. (The Writing Center, Univ. of Wisconsin)

Scientific Presentations

- Giving a Good Lightning Talk (Software Sustainability Institute)
- Scientific Presentations: A Cheat Sheet (Jack Leeming, *NatureJobs* (blog), March 2014)