The art – and science – of making effective posters

1. **The FIRST concern** (or: what’s the purpose, anyway?)

The purpose of a science poster is to present some important aspect of your research. It is not a journal article, and cannot – and should not be expected to – relay all of the information of a journal article. Though it is tempting to include many details and a great amount of data in a poster, a poster is better thought of as a ‘visual abstract.’ It should illustrate one or a couple of key points of your work, make clear its relevance and importance, and invite the one-on-one discussion that is the reward of a well-done poster – just as a written abstract does these things in a journal article.

As is true of busy scientists reading a journal abstract to determine whether to invest the time in reading the article, conference participants will decide which posters to pause in front of by how well the poster does these three functions: illustrate your key point, make clear its importance, and invite discussion.

To achieve this, your poster will have to capture and hold the attention of your audience. Your good science will be lost on potential viewers who don’t stop to read it.

2. **The TWO cardinal rules: Legibility & readability**

1. **Legible means POSSIBLE to be read.**
   - Examples of poor legibility: black letters on a dark image, blue text on a bright red background (poor-light-dark contrast; conflicting colors making the viewer work to distinguish the words from the background.)
   - **Readable means EASY to be read.**
   - Examples of poor readability: breaking a sentence up with a graph or image (readers have to hunt for the jump), graphs with data points for two different series in the same color and shape (series indistinguishable.)

3. **The THREE central principles: Simplicity, transparency, & your audience**

1. **SIMPLICITY**
   - Make every aspect of your poster — colors, fonts, graphs, and every word — serve your purpose. Resist the temptation to use gimmicks, clip-art and excessive complexity — extraneous material distracts from your message.
   - **TRANSPIRENCY**
   - The one thing you want noticed about your poster is its message. Again, consider how each element (image, graph, color, font…) serves your purpose. Good design does not draw attention to itself, but rather clarifies your message.
   - **CONSIDER YOUR AUDIENCE’S TIME**
   - There are often many more posters than time to take them all in. A poster that is engaging and easy to follow will draw attention and enable viewers to extract your message quickly.

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**Suggested Approach**

1. **Start with a CLEARLY FORMULATED ‘TAKE-HOME’ MESSAGE.** What do you want folks to think about and remember?
2. **Work on your headline.**
   - Choose elements that clearly contribute to the message.
   - Time spent thinking about how to word your title is well spent. In the fewest words possible, incorporate your research question and the central point of all your poster. Entice viewers — make them want to read more.
3. **Sketch a layout that:• includes ALL elements • visually prioritizes them**
4. **Digitally LAYOUT the poster.** ‘Less is more’ — make every word count — edit tightly, replace words with bullets, visuals, flow charts, etc. ‘Don’t crowd the board’ — too little white space makes a poster crowded and confusing.
5. **Cut, cut, cut!**

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**Some Details**

- Make every content and design decision CONSCIOUSLY and DELIBERATELY. For instance, don’t use your software’s default font or color scheme without actively choosing them over others. Don’t include unreadable or ambiguous graphics.
- Use TECHNICAL LANGUAGE appropriately but not unnecessarily. Keep in mind that people unfamiliar with your field may find your poster interesting. Don’t make it inaccessible to them. Keep your words as simple as possible without compromising your message.
- **BE CONCISE, and EDIT TIGHT!** Try bulleted points and the fewest number of words possible.
- **REPLACE TEXT** with a layout that illustrates your thought process, and guides the viewer through your poster.
- **BE VISUAL!** The background, technical details and a conclusion may need to be read, but an ideal poster expresses your core idea visually and draws viewers into the text, instead of requiring that the words be read to make sense of the visuals.

**Graphs & Figures**

- **Graphs need to be legible and necessary.** Keep coming back to your key point. Eliminate everything that doesn’t support that point.
- **Include a Caption**, labeled appropriately and legibly, for each image, graph and figure, explaining its relevance to the point of the poster.
- **Make the data readable.** Use a font consistent with your poster text font — either the same font, or one of its family (for instance, the bold version of your text font.) Label axes and cover the range appropriate for making your point. Clearly distinguish data series (by color, shape…)

**Fonts**

- **Don’t use contrasting fonts** unless you have a reason to. Use fonts sizes intentionally, to clarify relative prioritization of elements.
- To be readable everything needs to be LARGER THAN YOU EXPECT.
- **References** and **Acknowledgements**, typically are at the end of the flow, are in the smallest font.

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