Scientific Poster Design

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• Why create a poster?
• What are your goals for the poster?
Why create a poster?

Goals:
1. Get attention!
2. Generate interest in your work.
3. Present your most interesting findings.
The Swarthmore Challenge

Swarthmore students typically use too much text. (faculty too!)

“Posters with too many words will cause viewers to just read your figures or, more likely, to avoid your poster altogether.”

Colin Purrington (Former Professor of Biology and poster design expert)
Think about professional ads

• Notice how advertisers present material in a supermarket or on posters for shows, and online ads.

• A poster is very much like a TV ad – you need to grab the viewer’s attention and give them the critical details that make them want to learn more (and then to talk to you!)
Your poster

• After getting the attention of the potential reader, your poster serves as the support material for the *story you* want to present.

• It needs to stand on its own too, but too much text will make folks avoid your poster!
What’s wrong with this one?
Questions:

• What is it about?

• Who did the work?

• Where is the introduction?

• Can you see anything from 10 feet away?

• Can you read the text or maps easily?

• What is the Question? Results? Conclusions?
Elements of a good poster

• **Introduction** – *Brief* overview of why you’re doing this.

• **Question/Hypothesis/Problem:**
  What, in a few words, are you trying to answer?

• **Methods:**
  What did you actually do (Use graphics, illustrations, pictures, if possible)?

• **Results:** Graphic presentation of your key data.

• **Conclusion:** Summary, why is it significant, key points, future directions.

• **Contact information, References, Acknowledgements** (at the bottom)
Catchy title that hints at the underlying question

Your name(s) here

Department of Important Stuff, Swarthmore College, Swarthmore, PA,

Introduction
The bare minimum here to introduce your topic and provide relevant references that drew you to this question. Use bigger fonts than you think necessary!

Question
The Core question of your work;
- Do good posters really get cited more?
- What makes a poster good?
- Can you learn from a good poster?

Study Methods (or a photo)
What you did - precisely...
1. People were asked in a multiple choice survey which dog they thought was the better looking pooch...
2. Galvanic skin response was also measured via the electrodes attached to the skull and to the toes of the participants.

Results or Details of Study
Details and if possible graphs of data, or pictures of the research setup. Nulpa consors donebor testorit facias autem quia nosam restoratorium rechndi etotai edignumus aut cx est, sunt estissimes atempedicti valor sanctum labor

Bivariate Fit of Citations by Poster Quality

Discussion
Keep it short, but point out the relevant next steps and/or consequences.
This study shows that people really care about dogs, even ugly ones...
Nam nonsequas id quate prect voluptiri omniner exerum, quasimus, soluptanum di usumn expellabo. Nones utetur, ipsandnum insan qui sitia que sunt eaque sunt, quata dolup

Conclusions
Match the Questions:
- Yes, good posters get cited more.
- Images, clear concise writing and an easy to understand information flow make for the best posters.
- The best posters also help you learn.

Acknowledgments
We thank 1. Good for Laboratory assistance, Must hassle for results. Grid, all for help in progress, etc, and W. H. Marriott for questionable potential advice. Funding for this project was granted by the Swarthmore College Department of Biology, a Mark manner unpaid, unfunded. [Note that people names are omitted]

For further information
Please contact madame.bell@college.edu. More information on this and other policies can be obtained at www.swarthmore.edu. Hope this IHR (for laboratory research) is helpful to anyone. PDF version of the poster below also

Note: Some content of this mock-up from Colin Purrington: http://colinpurrington.com/tips/academic/posterdesign (2014)
Key Tips

• Make information flow from upper left to lower right.
  - Top to bottom, left to right - the way we read (English).

• It must flow, visually – posters are a **VISUAL** medium!

• Use a **san-serif** font (Arial, Helvetica) for the titles and headings
  and a **serif** font (Times New Roman, Palatino) for the body text – it
  will make it easier to read both.

• Use a standard science poster format.

• Bullet points are ok! (encouraged even)

• Present information in chunks, not long blocks of text.
Image tips

- Images from the web look bad when blown up. Find high resolution images – so you have at least 150 dpi on the page, which means at least 1500x1500 pixels for a 10” x 10” image.

- If you’re using Google image search, make sure you use the Search Tools, and set the size to be 4 MP or larger.

- Drop shadows on an image or a thin black or grey border can make your images pop off the page for the viewer.
More tips

• Left justify the body text - fully justified is hard to read.

• Line things up, or if not, make it a conscious, deliberate choice, with a clear organizational flow.

• Spread out the title words a bit with tracking controls.

• If you must have tables, shade every other row.

• Use color to make points, highlight things and communicate themes.

• Incorporate white space!
Another (intentionally) bad poster example

Pigs in Space: Effect of Zero-Gravity and Ad Libitum Feeding on Weight Gain in Cavia Porcellus

Colin B. Purrington
6673 College Avenue, Swarthmore, PA 19081 USA

ABSTRACT:
One problem faced by space travelers is a potential elimination of obesity, a major problem for a growing population of the world. In this research, the individual is in a condition of zero gravity, weightlessness. Indeed, in space one can slowly decrease fat, too thin to the point of being fat, and the only side effect would be the need to consider one's weight problem even more. But because many airlines can design a very poor diet, it would be more expensive to lose weight. In fact, the first experiment of the first experiment of the International Space Station (ISS) was designed to lose weight. Indeed, the first experiment of the first experiment of the International Space Station (ISS) was designed to lose weight. Indeed, the first experiment of the first experiment of the International Space Station (ISS) was designed to lose weight. Indeed, the first experiment of the first experiment of the International Space Station (ISS) was designed to lose weight.

INTRODUCTION:
The current obesity epidemic started in the early 1980s with the invention and proliferation of automobiles and motorized devices, which released people from the rigors of exercise and permitted weight gain without the need to buy new outfits. Indeed, exercise is essential to millions of people to exercise. The effects of a sedentary lifestyle on obesity, exercise, and diet are well documented. When gravity is zero, objects cease to be buoyant. Indeed, early astronauts and cosmonauts had to adjust themselves to their new lifestyle of sedentary and floating life. The potential alteration to the weightless environment was not realized in the space travel. The potential alteration to weight loss was not realized in weight loss. The potential alteration to weight loss was not realized in weight loss. The potential alteration to weight loss was not realized in weight loss. Hence, the potential alteration to weight loss was not realized in weight loss. The potential alteration to weight loss was not realized in weight loss. The potential alteration to weight loss was not realized in weight loss. Hence, the potential alteration to weight loss was not realized in weight loss.

RESULTS:
Mean weight of pigs in space was 0.0000 ± 0.0000 g. Some individuals weighed less than zero; some more but the reason was not accounted for. For example, pipette fell through the tube and hit the plate. Individuals on Earth, the control cohort gained about 1 g/hour (p = 0.0000). Piglets did not gain any weight on the control diet. Individuals on Earth, the control cohort gained about 1 g/hour (p = 0.0000). Piglets did not gain any weight on the control diet. Individuals on Earth, the control cohort gained about 1 g/hour (p = 0.0000). Piglets did not gain any weight on the control diet. Individuals on Earth, the control cohort gained about 1 g/hour (p = 0.0000). Piglets did not gain any weight on the control diet. Individuals on Earth, the control cohort gained about 1 g/hour (p = 0.0000). Piglets did not gain any weight on the control diet. Individuals on Earth, the control cohort gained about 1 g/hour (p = 0.0000). Piglets did not gain any weight on the control diet.

CONCLUSIONS:
Our view for the weight and weight loss would be to slow it down, so it was confirmed. Although we have not replicated the movement of larger animals or primates, we are confident that our results would be mirrored in other model organisms. We are currently in the process of gaining necessary human trial permissions, and should have our planned experiment initiated within 60 days, pending approval by local and Federal Ethics Committees.

ACKNOWLEDGEMENTS:
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LITERATURE CITED:
Using color

• Use contrast, not color, to make words stand out from background. Avoid colored backgrounds – they’re hard to read.

• Be careful about red/green color combinations for anything – roughly 8% of males have difficulty distinguishing reds from greens (0.5% for women). Other color anomalies are out there!

• Color is also useful to highlight major points, such as your abbreviated research question, and your answers to that question.
When printing in the Media Center

• Set page dimensions for 35” x 48” for the 36” paper.

• Set your color space for RGB - specifically Adobe RGB (1998)

• Test your poster on the big screen – can you read it from the other side of the room? (If not, make your text larger!)

• Print a copy on 11x17 (tabloid) paper first and have friends comment – if possible, when you’re not around!

• Use a white background and black text – easier to read and uses less ink.
Best poster creation tools

• **We’re partial to Adobe InDesign**
  – Great control over text, including text flow between text boxes, and around other objects
  – Outstanding layout capabilities: Designed for page layout of mostly textual content

• **Avoid Powerpoint (or Keynote)!**
  – Yes, it’s easy to use, but… designed for on screen presentations.
  – No good color control, page size limits, limited formatting controls, inflexible.
  – Takes longer to print (need to save as PDF, then print from Photoshop)

• **Other tools OK** (ie. Illustrator, Photoshop, Inkscape (free), LaTex, OmniGraffle, Quark, Poster Genius), but may need to still print from PDF through Photoshop in the Beardsley Media Center)
More resources on poster design

• Great (and humorous) advice from a former Swarthmore faculty member (When he was here, this page was the 2nd most popular web page at Swarthmore after only the main College web page!):
  https://colinpurrington.com/tips/poster-design

• Outstanding and well put-together introduction to science poster design:

• Good detail on various aspects of poster content and design:
  http://www.ncsu.edu/project/posters
Video version of this presentation

https://ensemble.swarthmore.edu/Watch/ScientificPosterDesign