How to Make a Great Poster

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Making a great poster can be fun and is certainly a challenge!
A GREAT POSTER IS...

readable,
Readability is a measure of how easily the ideas flow from one item to the next. Text that has lots of grammatical problems, complex or passive sentence structure, and misspellings is "hard to read".

legible,
If a text is legible, it can be deciphered. For example, an old book may not be legible if the paper has corroded or the lettering has faded. A common error in poster presentations is use of fonts that are too small to be read from 6-10 feet away, a typical distance for reading a poster.

well organized, and
Spatial organization makes the difference between reaching 95% rather than just 5% of your audience: time spent hunting for the next idea or piece of data is time taken away from thinking about the science.

succinct.
Studies show that you have only 11 seconds to grab and retain your audience's attention so make the punchline prominant and brief. Most of your audience is going to absorb only the punchline. Those who are directly involved in related research will seek you out anyway and chat with you at length so you can afford to leave out all the details and tell those who are really interested the "nitty gritty" later.

Here are some ideas about how
to get the most attention for your efforts.

1. Two ways to make a poster are to

have someone else do it, or
A professional illustrator will ask you about all the items in this presentation so they may not save you time if it is the decision making that is slowing you down! Although they will save you time in the execution of the work, you are the final arbiter of the quality and content of the poster.

make your own.
Designing the poster panels deserves consideration (How to Make Great Slides). Most posters are most quickly made using some kind of computer software. A word processing program plus a few graphics packages (e.g. Microsoft Powerpoint, Macromedia Freehand, Adobe Illustrator, Adobe Photoshop, Adobe PageMaker) are important tools. Of these, Powerpoint has the least sophisticated graphics options. If you have not tried computer graphics or are just starting out, find someone whose poster you like and ask them what they use and if they like it.

2. Choosing between two popular formats:

A large format poster.
These are printed as a single large sheet.

A multiple panel poster.
These are composed of printed individually elements, predominantly 8.5X11 inches each, that get assembled into a poster on site.

The style you chose is a matter of cost and personal taste. What are the tradeoffs? Large format posters require access to a large format printer (Kinko's or other computer-based copying companies have these) and the latter can be done largely with tools

in your office or lab. Both formats are portable although large format posters are awkward to carry without a good carrier tube with a shoulder strap. Both are affordable ($0.5 to 1.0 per inch versus about $50 for a multiple panel poster). In contrast to the multiple panel poster, you must reprint the whole large format poster if 1) the data change at the last minute or 2) the colors on printing turn out to be really ugly or 3) you spill a liquid on it (unless laminated they run badly if they get wet). If any of these factors are at issue, you may wish to consider a multiple panel poster: it is easy to reprint individual elements without having to make the whole thing over again. Although there is no question that it is easier to mount the large format poster once on site - 4 tacks and you are done - there is no way to rearrange the panels within your large format poster once it is printed. If you are going to two meetings and need a different sized poster for each, then you might consider a large format poster instead since unless you omit panels or change the spacing between them, the multiple panel poster is somewhat harder to change in size.

There are many ways to make the panels of your poster. For element composition within a panel please see (How to Make Great Slides). [Here, a panel is equal to a slide and an element is part of a panel.] For details on how to make and assemble a multiple panel poster, please go to the Multiple panel poster details, How to Make Great Slides (PDF).

3. To begin:

decide what the main message is,
Keep it short and sweet and make this your title! Use the active voice (i.e., avoid "ing" on the ends of verbs) and avoid the verb "to be" whenever possible.

measure the space you have,
Regardless of poster format, lay out the space physically as well as on paper to double-check yourself. If you can, make the poster flexible enough to change the size by adding or omitting panels or elements. This flexibility is handy if you are going to more than one meeting, if the poster boards are not exactly the size advertised, if the meetings have different in size requirements for posters, or if you wish to update your data between meetings.

lay out your panels crudely,
Before you actually spend time making the final panels of the poster, take pieces of paper that are about the right size and see if you can actually make it all fit. This will save you a lot of time in the long run.

ELIMINATE all extraneous material,
Given that the average poster gazer spends less than 10 minutes on your work and you have 11 seconds to trap your subject before they move on, only show data that adds to your central message. You do need a Title, Authors, Introduction, Results, and Conclusions. Some meetings require you to include the abstract also. Usually, omitting Materials & Methods is fine: most people will not read them anyway. If you wish, have a methods handout for those who ask for it. Although sometimes the method is essential to understand the data or the validity of the conclusions, most of the time, a short version here will do as well.

Consider making handouts that include the full poster in miniature on one face and then all that other material on the opposite side. Methods, references, detailed contact information, advertisement for a postdoctoral fellowship (to ask for or to give out one), or extra data are all good options for the flip side. Take from 50-400 handouts per a meeting and leave them as a stack under your poster. This is a great way to gauge the success of your poster.

begin to make individual components of the poster!

4. Poster Layout has Two Aspects:

Consider how to arrange poster elements and text within each panel and
People approach new information in a known spatial sequence: we track vertically from center to top to bottom, and horizontally from left to right. This means that you should put the most important message in the center top position followed by the top left, top right, bottom left, and finish in the bottom right corner. That's why the poster title should be your punch line because, in that position, the title and your name will be seen in the first 11 seconds that a person looks at the poster.

The overall format of a good poster is dictated by the way we assimilate information. For example, you would never put your first panel on the right and ask your reader to proceed to the left because we are not trained to read that way. Newspaper format, two vertical columns that are arranged so that you read the left one first and then the right one, is highly "readable" since the reader does not spend time figuring out which panel to read next. A left to right horizontal rows arrangement works too but is not as common. You can easily walk around any meeting and find lots of variation.

Space is important in a poster: without it, your reader has no visual pauses to think. Books leave space on the margins and by having chapters. Posters that are crammed with information are tiring to read and are seldom read in their entirety. Omit all extrane-

ous text or visual distractions, including borders between related data and text, so the reader can assimilate your ideas easily.

Size of poster elements or the fonts in each panel can serve to emphasize the main points. For example, making your subheadings in all capitals and two font sizes larger than the rest of the text on the same panel will draw the reader's eye first, and so be emphasized. The use of multiple fonts in a poster can distract from the science.

You will lend the most power to your words if you spatially arrange the text in each panel of your poster following the same principles used for the poster layout as a whole. A common street sign reads "go children slow". Because the word "children" is in capitals larger than the other words and is in the center of the image, you read "Children, go slow" even though that is not the actual spatial arrangement of the words in the sign. This sign is powerful, succinct, and highly readable.

practical matters.
It takes time to make a great poster. Regardless of format, allow 2 to 3 days to assemble all the bits and pieces, such as photos etc, and then 1.5 to 2 days to assemble the poster. That last bit of data you rush around to get at the last moment will go completely unnoticed if your poster is messy and disorganized i.e. illegible and unreadable.

It costs roughly $50 to make a poster for either format. If you have poster made for you it can cost from $300 to $3,000 (average of $***.00 at the University of Washington) depending on how much of it you do yourself.

Portability is worth considering. The poster should fit into carry-on luggage so that even if your suitcase is lost, you can still present your work. If all your poster panels can stack and be packaged together, great. If you opt for a large format roll-up poster, do buy/make a nice tube with a shoulder strap to transport it in and to keep it dry.

A great poster is easy to mount on site and can be flexible in assembly in case the poster space is smaller than advertised. If you cannot mount the poster by yourself or the poster is awkward for one person to mount on the materials provided, be sure you arrange for someone to help you. For example, when the poster boards are wobbly it can be hard to push the pins in without pushing over the poster board! Often the person next to you will be glad to exchange labor. If you opted for a multiple panel poster then a map of how the poster should look when it is done is handy when you need to work quickly, are distracted or nervous.

5. Font Choices Give You Options With

size,
Font sizes need to be big to be effective. A good rule is to stand back from your own poster: if you, who are familiar with the material, cannot easily read it from 6 feet away, your audience will certainly not be able to.

highlighting with text format,
Indents set text apart and are great for short lists.
Justification of text in the center of a line will draw attention.

basic font choice and highlighting with font variations.
Choose a basic font whose "e's" and "a's" stay open at all sizes and that is supported by your printer. Bookman, Helvetica, and Geneva are examples of good choices. The choice of serif or sans serif is largely a personal matter. If your font is not supported by the printer, you will get ragged edges on all your letters.

Highlighting a few parts of the text is done easily with:

/ capitals as in the "go CHILDREN slow" or the "Stop,..." street signs, / Zapf dingbats instead of numbers for simple lists of things, / wrapped letters that arc around an image, / switch styles (bold, italics, shadow, etc.).

6. Color

Ways to add color,
A color border or background is a fast way to add color to a poster. Choosing colors that do not compete with your data, that look good once printed, and that color blind people can see is wise.

If you opted for a multiple panel poster, then LaserFoil allows you to make your printed words from a laser printer come out in color. Available in mat, glossy, and "prism" finishes, LaserFoil can add pizzaz to a poster. Colored graphic tape or dots, and white arrows (Chartpak, Lettraset) can be quickly applied to poster elements to draw attention to the elements you wish to.

contrast,
Proper contrast will reduce eye strain and make the poster more legible and interesting visually. Again, be careful that the color does not outclass the visual impact of your data: too much contrast is hard on the eyes and can distract the reader from your data.

Adding light color backgrounds to your figures can make the poster attractive. For example, using white lettering and lines on a blue background can make your poster eyecatching. Like a painting, poster elements can also be double matted physically or digitally to add interesting contrast.

fidelity of reproduction,

Images do not stay the same between one medium and the next and this is especially true for color quality. Although it is efficient to use computer-generated color images as poster elements, you always lose some fidelity in doing so. For example, the edges of letters will blur slightly in going from a slide to a printed image or vice versa. Also, the colors you see on your monitor are usually not what comes out on the slide or on the final, printed poster element. You can "adjust" your monitor and check professional color books that show what the slide film recorders will print. However, it will not be an exact match from screen to print no matter what you do. Automatic film recorders used to print computer images also vary from model to model and from run to run just like photographic printing machines do. To keep the color "true", request custom printing. A good rule of thumb is to switch media as few times as possible

Do get a small print of your large format poster before you print the big one to check for all these color issues.

7. Check Two Things Before You "Assemble" the Poster

have others review it for you,

Have some people look over your poster before you call it "done". If they are confused, it is far better to fix it now than to lose people at the meeting. Pay particular attention to things that may not be necessary: eliminate everything that you can!

do take a moment for ethical considerations.

Do follow basic rules for authorship, citation of the literature, etc. because the consequences for ethical breaches are quite serious (TBI, ASPB policies). For example, images can be touched up with Adobe Photoshop. State exactly what modifications have been made to the images - it is very easy to alter your own data (falsification) and you must be able to defend any and all of your changes. Do credit others for their work (plagiarism).

8. Finishing Your Poster

It is trivial to assemble a poster once you have decided on and made all the individual elements. Be sure to give yourself enough time to finish the poster, say 1-3 days, so you have time to reprint it if necessary to revise color or content, or to simply get into the printing queue!

I always take my own tacks: I prefer the stainless steel 1/2" ones so I know the poster will stay up for the whole meeting and that I can actually get them into the poster board.

Good luck and have fun making your poster and showing it. Displaying your finished work is a big accomplishment so take time to enjoy it and your interactions at the meeting. Remember that enthusiasm is contagious. Be on time and enthusiastic about showing your poster to colleagues at the assigned times during the meeting - it is a fine opportunity to advertise yourself and your work!