# **Designing a Viewer-Friendly Research Poster**

Carnegie Mellon University Student Academic Success Center Communication Support

Poster sessions are a great venue for sharing your research with a wide group of people. When you create a poster to showcase your work, it can be difficult to know what information to include, how much, and how to best organize it. A confusing, distracting, or unprofessional poster can turn viewers away before they even learn the topic of your research.

This handout details some of these common problems researchers face when designing a research poster, and offers simple solutions to these problems. We do so by comparing three posters: two where the elements are effectively applied (**Readable Research Posters 1 and 2**) and one where the elements are not applied (**The Unreadable Research Poster**).



increase viewer retention of these points.

element.

## **Readable Research Poster 1**

## **Readable Research Poster 2**

#### **Visual Hierarchy**

The information on this poster is well organized. Font sizes increase with importance (the title is the largest font size, followed by the headers, then the body text). The category that contain the most general information is at the top, and the category that the researchers want viewers to spend the most time on is the largest.

#### **Headings**

The headings are clear and to the point. Viewers know exactly what type of information to expect in each section and because the titles are generalized, viewers can easily recognize the relative importance of each section.

#### **Use of Figures**

When viewers look at research posters, their attention quickly moves toward the images and figures. This poster has carefully chosen figures that best represent the most important parts of their research, and has placed each of these important figures next to relevant text. The figures aid rather than distract from a viewer's comprehension of the data.

## Correct horse battery staple:

#### Exploring the usability of system-assigned passphrases

Richard Shay, Patrick Gage Kelley, Saranga Komanduri, Michelle L. Mazurek, Blase Ur, Timothy Vidas, Lujo Bauer, Nicolas Christin, Lorrie Faith Cranor

#### Motivation

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- Explore usability of 3- and 4-word systemassigned passphrases in comparison to systemassigned passwords of similar security
- Assigning passwords and passphrases lets us control security to focus on usability

#### Findings

Do people like passwords or passphrases more? It depends on the metric. Some passphrases were perceived as easier or more fun, but passphrases had a higher dropout rate than passwords.

Are some passphrase schemes more usable than others? Our conditions affected user sentiment but not performance.

> "Learning my password was annoying" (Blue means annoying)



#### Methodology

- 1476-participant MTurk study
- Participants assigned password or passphrase, fill out survey, recall password or passphrase, return two days later, recall password or passphrase, fill out another survey
- Most conditions have similar security, and we compared usability

#### Conditions

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Are people more accurate or faster entering passwords or passphrases? Passwords took less time to enter, and had fewer mistakes.



Can we improve passphrase accuracy through error-correction? Yes. Passphrases can become as accurate as passwords with error-correction.



### Text

There is a reasonable amount of text on this poster. The text is in a reader-friendly font and size (36 to 44 pt for headings and 22 pt for body text) and sticks to explaining the "big picture," or the core ideas, of the research. (Details of the research are best discussed verbally, with viewers who want to know more.) The text is also often chunked into bullet points, which helps readers quickly scan the information.

#### Colors

The major design elements on this poster are all one color. This helps unify the design and keep the focus on the text and figures, rather than on distracting headings or borders. When other colors are used, they help viewers understand information and do not distract viewers.

### Whitespace

Rather than borders and boxes, this poster uses whitespace to organize and de-clutter content. This helps viewers to navigate the poster's information without becoming overwhelmed.



## The Unreadable Research Poster

### Text

This poster is crowded with text, which discourages viewers from reading it. Much of the text concerns relatively unimportant details of the procedure and results rather than main points or "takeaways"

#### Whitespace

This poster has almost no whitespace (space with no text or design elements) so it feels very crowded, which is uninviting to viewers. The whitespace is filled by unnecessary elements like borders and solid-color boxes.

#### **Use of Figures**

The images, graphs, and other figures used in this poster are visually separated from the text with lines and boxes, and are not referenced within the text. This makes it difficult for viewers to understand how the figures support the conclusions, or otherwise fit into the "story" of the research.

#### Colors

This poster has many bright, distracting colors that compete for the viewer's attention.