


Academic Poster Presentations

What is the purpose of an academic poster?

- To present your research visually
- To give an accessible overview of your research
- To encourage the audience to read your paper
- To answer questions and get immediate feedback
- To present research-in-progress in a formal setting

What information should a poster contain?

Who?	Author(s) information; Department; Contact Information
What?	A description of your project's topic; an introduction to your research
Why?	The purpose for your research; a rationale; what is motivating the research
When, Where, and How?	Research methods; observations; the plan; how will you answer your research question
So What?	What are the implications of research; Why should your audience care?
Now What?	Future uses for research; related literature; What happens next?

Rule of Thumb  30% Text 30% Graphics 40% Empty Space

Tips for Text

- Use accessible fonts – *Not a font like this!*
- Keep your font consistent across the poster
- The title should be the largest text on your poster
- Use a consistent hierarchy of font sizes. 72 pt. for titles; 36 pt. for subtitles; 24 pt. for body text
- For physical posters, all text must be easily readable from 4-feet
- Be concise! The less text on your poster, the better! Use short sentences or bullet points!
- Use **boldface**, underlining, or **colour** to add emphasis to text

Tips for Graphics

- Use primary and complimentary colours! Avoid high and low contrast
- Any visuals should be simple, clear, and high quality
- Pay attention to image resolution; low resolution will result in blurry images when printed
- Be cautious of copyright! Look for images under Creative Commons license and always **cite your sources!**
- Label all graphs and tables the same way as you would in a lab report or essay!
- For charts and graphs, copy and paste directly from Excel

Examples:

Heavy Metal Sequestration by Douglas Firs on Serpentine Soil
 Angel Fong, Emma Hansen-Smith, Joyce Wong
 Department of Land, Air and Water Resources
 University of California, Davis, 95616

Introduction
 Serpentine soils are derived from ultramafic rocks, creating harsh soil environments with heavy metals that are toxic to plants. Some evergreens respond to heavy metal toxicity by sequestering heavy metals in their foliage, roots, or bark. Black spruce located in heavy metal contaminated sites sequesters Cu and Pb in their needles, while Turkish red pine sequesters copper, lead, nickel, iron, and cadmium from the air to bark. To study evergreen heavy metal adaptations, soils and needles from *Pseudotsuga menziesii* (Douglas fir) on serpentine soils will be analyzed for heavy metal concentrations.

Methods
 We first collected Douglas Fir needles from two sites within the Six Rivers National Forest, one with serpentine soils (Fig. 2) and one with non-serpentine soils (Fig. 3). The concentrations of individual heavy metals (Fe, Mn, Ni, and Cr) in the needles were determined by inductively coupled plasma mass spectrometry (ICP-MS). We used gravimetry to determine the overall concentration of heavy metal and an Elementar combustion analyzer to determine the nitrogen concentration in the needles.

Results
 • There were higher metal concentrations in the non-serpentine site's needles compared to the serpentine site.
 • Lower calcium to magnesium ratios serpentine site, indicating plant growth limitations.
 • There were higher nickel concentrations serpentine site's needles, but higher chromium levels in the non-serpentine site's needles.
 • Manganese concentrations are higher on the non-serpentine site. This could be driving the higher heavy metal concentrations in its needles compared to the serpentine site.
 • It is possible that Douglas Fir trees are adapted to taking up lower concentrations of heavy metals from serpentine soils, since too much heavy metal sequestration could be detrimental to the Douglas Fir tree. This could explain why heavy metal concentrations were lower in the serpentine site.
 • Douglas Fir trees on this schist site do not seem well-adapted to preventing heavy metal uptake, as such uptake in the schist site does not appear to be detrimental to the trees.

Conclusion
 Many thanks to Katy Dyrwael, Scott Mitchell, and Dr. Benjamin Houston for their guidance and assistance on this project.
 References: *Azhar et al., 2008. Water Air Soil Pollution; *Fogel et al., 2010, Biology

INTERNET INEQUALITY: THE IMPACT OF HOME INTERNET ACCESS ON SCHOOL SUCCESS
 — Department of Economics — The University of Texas at Austin

ABSTRACT
 In addition to a wide education gap between Hispanic and non-Hispanic White students, there also exists a persistent gap in home internet access between these two groups. In my research, I identify a link between these two trends by analyzing data from the Current Population Survey. My research shows that lower rates of home internet access contributes to educational gaps between ethnic groups and that home internet access relates to higher school success.

BACKGROUND
 Percent of Households Lacking Internet Use, by Race and Ethnicity

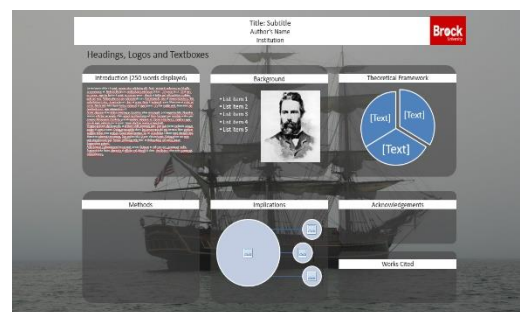
METHODOLOGY
DATASET • Used cross-sectional data on students ages 13-17 from the 2009, 2010, and 2012 Current Population Surveys.
SUCCESS ESTIMATOR • Generated a variable measuring grade retention to estimate school success for each student.
REGRESSION MODEL • Employed an Ordinary Least Squares regression model to identify correlations between internet access and school success.

RESULTS
 • Hispanic students are significantly more likely to be below grade level than their White peers.
 • Differences in school success are mostly attributed to income.
 • Some differences can be explained by difference in access to home internet.
 • Students who lack internet access, regardless of race or income, have lower success in school.

CONCLUSION
 Home internet access has a significant effect on school performance, and it explains some difference in educational outcomes between first generation Hispanic and White. While increased home internet access may decrease grade retention and dropout rates, it is unlikely to affect gaps in school success between different racial and ethnic groups.

Building Your Poster

- Microsoft PowerPoint is a great option for developing your academic poster, and it is available to all Brock students!
- To get started...
 1. Open a new file > select the “Design” tab > click on “Slide Size” > select “Custom Size”
 2. Change the slide size to you desired amount. The standard academic poster size is 36” L x 48” W (91.44 cm x 121.92 cm)
 3. Under the “Insert” tab, you can begin to add various elements like Pictures, SmartArt, Shapes, Text Boxes, etc.
- Use the “Shapes” tool to create distinct sections on your poster



Printing Your Poster

- You can print your poster through Printing Services here at Brock. More info can be found at brocku.ca/printing
- Printing Services can be found in Mackenzie Chown G Block (MCG 210)