



Improve Presentation Slides with Visual Explanations

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When visuals explain better than words

The evidence from learning science suggests that adding visuals to the text of instructional materials can help students learn better (Mayer 2001). If you are looking for a way to improve the usefulness of your lecture presentation slides, exploring ways to include visual explanations might be time well spent. See the "Visual Explanations" sidebar for typical examples of explanatory graphics used in instructional materials.

Keep it simple

Use decorative elements sparingly and unobtrusively. Flashy transitions and fancy templates often distract students and impede learning. Avoid the temptation to use decorative graphics in an effort to break up text. Visuals are most effective when they help keep student attention on topic.

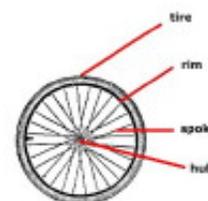
Use sentence headlines

Of course, you'll still need text on your slides. I like [Dr. Michael Alley's Assertion-Evidence Slide Design](#), where slide titles take the form of full-sentence assertions, rather than noun phrases or bullet points. Fig. 1 below shows the redesign of a typical "bullet point" style slide to an assertion-evidence format.

Visual Explanations

Real Objects

Talking about stuff in the physical world? Show what you're talking about!



A callout diagram shows object parts, like this diagram of a bicycle wheel.

Graphic Organizers

Graphic organizers show relationships.



All you need are some simple boxes and arrows. This diagram shows 5 steps in a process.

Concept Maps

Concept maps are a kind of graphic



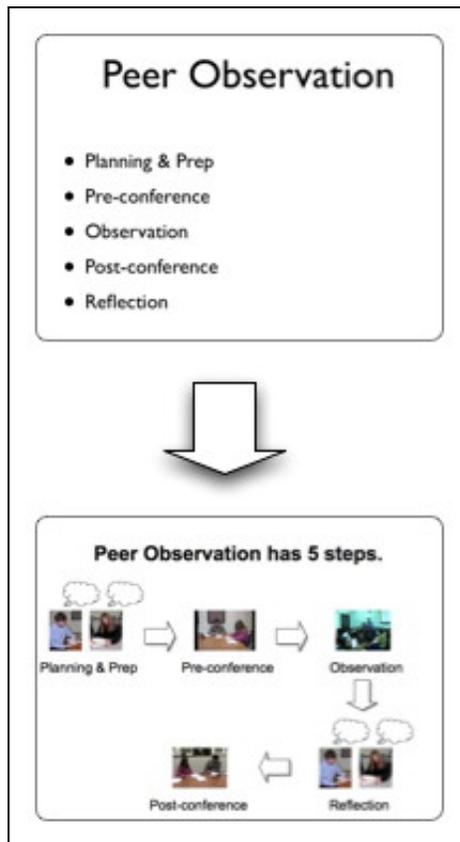


Fig 1. Redesigning a slide to assertion-evidence format.

Software for constructing visuals

If you're interested in learning how to construct your own visuals for slide presentations, here are a few avenues to explore.

If you don't already know how, get comfortable using images from search engines like images.google.com, and/or images from your own camera. About copyright: It's good practice to note where you get your images and properly attribute your sources.

Slide programs like MS PowerPoint or Apple Keynote have built-in drawing tools suitable for creating simple diagrams with boxes, arrows, etc. This is a good way to get started without having to learn extra software.

For the record, I use a combination of several programs to create my visuals. The drawing tools in Apple Keynote are awesome, and I use the excellent drawing program OmniGraffle to prepare more complex diagrams. I use Adobe Photoshop to resize/crop images, especially photos from my camera. For quick jobs, batch processing and unusual graphic file formats, I use GraphicConverter.

Assistance is available

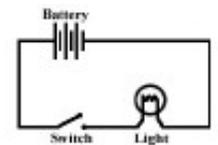
Instructors can get help with constructing visuals from

organizer where ideas are linked by labeled relations. This is an excerpt from a concept map prepared by NASA on the topic "Mars: Myth and Science Fiction" using free software called CMap cmap.ihmc.us



Schematics

Diagrams, maps, charts, schematics, blueprints are the bread and butter of many technical disciplines, and their explanatory power is often self-evident. This diagram shows a simple circuit (from NASA). Diagrams used in presentation slides must be very simple because of space/resolution limitations. Complex diagrams are better suited to paper or web sites.



Applied Technologies for Learning in the Arts & Sciences (ATLAS), the college instructional technology support group. See what we have online at: www.atlas.uiuc.edu/teaching ATLAS, CITES EdTech, the Center for Teaching Excellence (CTE) collaborate to offer workshops and presentations on using presentation software for lectures and research presentations.

Resources

- ATLAS: www.atlas.uiuc.edu
- CMap: Concept Mapping Software: cmap.ihmc.us
- Apple Keynote: Slide Software: www.apple.com/iwork/keynote
- OmniGraffle: Diagramming Software www.omnigroup.com/applications/omnigraffle/
- GraphicConverter: Image Utility www.lemkesoft.com
- Adobe PhotoShop: www.adobe.com/products/photoshop
- Jim Witte. Explaining with Graphics: jwitte.uiuc-atlas.net/graphics
- Brian McNurlen, Chris Migotsky, Jim Witte. Beyond Bullet Points: Suggestions for Effective PowerPoint Lectures jwitte.uiuc-atlas.net/beyond

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