Tips for Effective Presentation Slides

Why effective presentation slides matter

Presentation software like Microsoft PowerPoint, Apple Keynote, and Prezi are ubiquitous in medical education and the business of healthcare. When used appropriately in a direct presentation format, these tools let educators display visual aids, emphasize key points, and interact with learners to promote their understanding.

Unfortunately, these widely used tools can also interfere with learning when used in suboptimal ways. Complex material has high intrinsic cognitive load, and poor presentation of complex material needlessly adds extraneous cognitive load.[1-3]

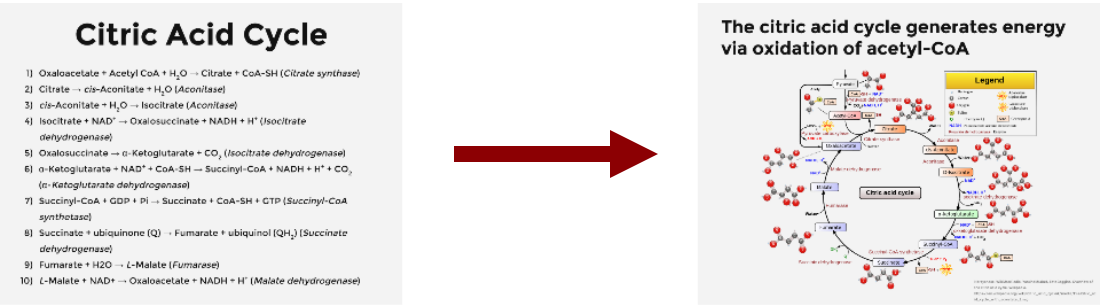
When designing slides for your presentation, consider the following best practices to reduce cognitive load and increase understanding:

Assertion-Evidence slide design

"Traditional" slide design includes a top-center headline phrase, followed by a bulleted list of information and/or a supporting image or figure. When used indiscriminately, bulleted lists can skew the presentation of information, whether by fragmenting, oversimplifying, or oversaturating.[1-3]

As an alternative, **Assertion-Evidence (A-E) slide design** encourages the following structure for each slide:

1. **A headline that contains the main assertion or message in the form of a sentence:** This ensures that the most important information is clearly stated on each slide.
2. **Supporting evidence for the main assertion:** Visual evidence is preferable over words. Bulleted lists are avoided.[4] This means that speakers won't be able to use slides themselves as presentation notes but must still be able to explain the evidence clearly.[3]



Studies comparing traditional slide design to A-E slide design in engineering and veterinary students have shown increased comprehension and retention of presented material in the A-E slide design group.[3,5,6]

Pearls for formatting presentation slides

- **Aim for legibility:**
  - **Use large font sizes.** Sizes greater than 18 pt on text, graphs, and diagrams will ensure that learners in the back of the room will be able to read your slides.[7]
  - **Choose simple fonts.** Ornate or stylized fonts are less legible and make reading times slower.[8,9]
  - **Apply high-contrast colors.** This usually means light text on a dark background, or vice versa. Note that some color combinations can make reading challenging – e.g. red on blue, or green on red. Use bright colors with care, as they may be harsh on eyes when used in large amounts.[10] Learners may have color blindness, so test your slides' color combinations using a color blindness simulator.
  - **Avoid centering text.** Remember that English readers read from left-to-right, and blocks of text are usually left-justified.
- **Find the right diagram for the task.** As an alternative to bulleted lists, ask if information can be displayed differently. For example, a list of times or dates may be better understood as a timeline.[3]
- **Avoid using unrelated "clip art", graphics, or sound effects.** Research has shown that unrelated content can decrease recall and generally aren't favorably viewed by learners.[1]
- **Strive to keep slides "light".** Studies suggest displaying no more than 20 projected words per minute. Try to keep blocks of text to 2 lines at the most.[3]

References

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Checklist for Effective Presentation Slides

Layout:

- ☐ Are each slide's **images, sounds, and videos relevant and necessary** to understanding the information on the slide?
- ☐ Are **data portrayed appropriately** using table or diagrams?
- ☐ Can **alternative slide design** (e.g. Assertion-Evidence design) be used to better convey the message? (Learn more at http://www.assertion-evidence.com/tutorial.html)

Typography:

- ☐ Are **large font sizes (18 pts or more)** being used?
- ☐ Are **fonts easy-to-read**, and not ornate or stylized?
- ☐ Are **headings, sentences, paragraphs, and lists left-justified**?
- ☐ Consider **trimming text to no more than 20 projected words per minute**.
- ☐ Consider **keeping blocks of text to 2 lines at the most**.

Colors:

- ☐ Does the **color of text, graphs, and other content contrast adequately with background color**?
- ☐ Have slides and figures been tested for **color blindness accessibility**? (Learn more at http://www.thinkoutsidetheslide.com/issue-330-february-3-2015/)