CREATING SLIDE PRESENTATIONS

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HEADINGS & TITLES

- White text on a dark background grab a reader's attention.
- White reflects all colors of the visible light spectrum into the eyes making the text bright and distinct.
- It also doesn't put stress on the reader's eyes because scanning doesn’t involve long visual fixations.

Solomon, S. & Lennie, P. (2007). *The machinery of colour vision*. Nat Rev Neurosci 8, 276–286. https://doi.org/10.1038/nrn2094

PARAGRAPH TEXT

- Avoid using white text on a dark background when displaying paragraph text to make it easier to read.

- Forcing users to fixate on the white text for a long time can strain the eyes. This is because white stimulates all three types of color sensitive visual receptors in the human eye in nearly equal amounts (Solomon & Lennie, 2007).

- If you’re reading text in a dark room where no light is present, white text on a black background isn’t as hard to read because no light is reflecting off it.

Solomon, S. & Lennie, P. (2007). *The machinery of colour vision*. Nat Rev Neurosci 8, 276–286. https://doi.org/10.1038/nrn2094

PARAGRAPH TEXT

Black text on a light background with a tint of gray is a better choice for paragraph text since less light reflects behind the words, making it easier on the eyes. Black text works better because black is also a color that doesn’t reflect light in any part of the visible spectrum. Therefore, fixating on black text while reading won’t put as much stress on the eyes because it absorbs the light that hits each word.

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FONT

- Sans-serif fonts are easier to read. Examples include Arial, Calibri, Century Gothic, Helvetica, Montserrat, Tahoma and Verdana (Morey-Tatay, C & Perea, M. (2007).

- They are best used for both title and body text.

- They are also Americans with Disabilities Act (ADA) compliant.

- Text should be at a 28 or 32 point size.

Morey-Tatay, C. & Perea, M. Do serifs provide an advantage in the recognition of written words? Journal of Cognitive Psychology 23-5, 619-624 (2011). https://doi.org/10.1080/20445911.2011.546781

GRAPHICS

- Verbal information supplemented with relevant images is better retained than information presented simultaneously with both graphics and text.

- Students remember more if instructors speak to images on a slide, rather than images and redundant text (i.e., bullet points that say what the speaker is saying).

Mayer, R.E. (2009). *Multimedia learning*. New York, NY: Cambridge University Press.

GRAPHICS

- Irrelevant items detract from learning and cause a decrease in performance. (Mayer, 2001, Moreno & Mayer, 2000, Rieber, 1996).

- Unrelated graphics are a distraction and produce interference.

- Graphics are not necessary for simple declarative information, but help with more difficult, complex, or abstract concepts.

GRAPHICS

- Images that are superfluous or inconsistent with the instructor's verbal output may hinder student retention (e.g., Bartsch and Cobern, 2003).

- Avoid clipart, images with watermarks and low-resolution images (i.e., no less than 1600 × 1200 pixels),

- Irrelevant sounds (Moreno & Mayer, 2000), interesting but extraneous text (Schraw, 1998), and irrelevant pictures all reduce comprehension.

Moreno,R. & R.E Mayer. (2000). *A coherence effect in multimedia learning: the case for minimizing irrelevant sounds in the design of multimedia instructional messages*. Journal of Educational Psychology, 92, pp. 117-125.

ANIMATIONS

Animations may at times be necessary, but they are more distracting than anything else (Daffner, 2003).

Daffner, R. H. (2003). *On improvement of scientific presentations: using PowerPoint*. Am. J. Roentgenol. 181, 47–49. doi: 10.2214/ajr.181.1.1810047

VIDEOS

- Videos should be embedded.
- Relying on an internet connection to stream content can be risky and break up the flow of the presentation (Schmaltz & Enström, 2014).

Schmaltz Rodney M. & Enström Rickard. (2014). Death to weak PowerPoint: strategies to create effective visual presentations. Frontiers in Psychology. V.5. URL=https://www.frontiersin.org/article/10.3389/fpsyg.2014.01138

BULLET POINTS

- Keep them short.
- Highlight key points.
- They should enable quick understanding of content so audience can also focus on listening.
- Use them to break up large chunks of text.
- Don't overcrowd your slides.

Gross-Davis, B. (2009). *Tools for Teaching*.

FINAL THOUGHTS

- At the beginning of the term, provide students with an overview of how your slides are going to look, what is expected of them while listening, and what is expected when they are delivering a slide presentation.

- Properly created slides take less time to create than text-heavy slides and force students to pay attention.

- Brainstorming active listening and effective note-taking strategies with students is a good idea.

- Effective presentations can prevent student distraction and facilitate a better teaching & learning experience and better performance.

Bartsch, R.A. & Cobern, K.M. (2003). Effectiveness of PowerPoint presentations in lectures. Journal of Computers & Education, 4-1, pp. 77-86.

Daffner, R. H. (2003). On improvement of scientific presentations: using PowerPoint. Am. J. Roentgenol. 181, 47–49. doi: 10.2214/ajr.181.1.1810047

Mayer, R.E. (2009). Multimedia learning. New York, NY: Cambridge University Press.

Moreno,R. & R.E Mayer. (2000). A coherence effect in multimedia learning: the case for minimizing irrelevant sounds in the design of multimedia instructional messages. Journal of Educational Psychology, 92, pp. 117-125.

Rieber, L.P. (1996). Animation as a distractor to learning. International Journal of Instructional Media, 23, pp. 53-57.

Schmaltz Rodney M. & Enström Rickard. (2014). Death to weak PowerPoint: strategies to create effective visual presentations. Frontiers in Psychology. v.5.

Schraw, G. (1998). Processing and recall differences among seductive details. Journal of Educational Psychology, 90, pp. 3-12.

Solomon, S. & Lennie, P. (2007). The machinery of colour vision. Nat Rev Neurosci 8, 276–286. https://doi.org/10.1038/nrn2094

*All images free from unsplash.com