

Design Guide for Visual Presentations

Heather Tobin, January 2020

Overview

This guide offers a synthesis of the current best practices relevant to the design of visual presentations. The practices are presented in a simplified format for use as a reference point across multiple contexts. The works of Richard E. Mayer, Roxana Moreno, Robin Williams, Garr Reynolds, Connie Malamed, Melanie Hibbert, Scott Dadich, and shiftlearning.com serve as primary inspiration. Full reference information is provided for each source at the end.

Guidelines

Screen Layout

Mayer's Spatial Contiguity Principle: People learn better when onscreen text is presented next to the animation that it describes

Mayer's Coherence Principle: People learn better when extraneous elements are excluded

- Use the **rule of thirds**: split the screen into a 3x3 grid of 3 equally spaced rows and 3 equally spaced columns, then place important elements at 1 or more of the intersecting points
- Group content to create meaning and connection (e.g. explanatory text near related visuals)
- Establish a visual hierarchy to let viewers know where to look
- Organize horizontally or vertically – in columns or rows
- Create a strong focal point
- Avoid holes in the layout by moving that space to the outside instead
- Remember that less can sometimes be more – keep the screen as un-cluttered as possible
- Use bullet lists to group information, condense content, and increase white space
- The body of text should take up 25-40% of the screen
- Favor graphics over text



*For more ideas, check out [PC World's list of the 10 worst PowerPoint presentations!](#)

Color and Contrast

Mayer's Signaling Principle: People learn better with cues that highlight organization of essential material

- Use contrasting colors to direct attention and create distinction
- Use harmonious colors to unify concepts
- Repeat your color scheme throughout to create consistency
- Use only 2-3 different colors
- **60>30>10 rule**: 60% of one color, 30% of another, and 10% of a third
- Use shades of the same color – brightly colored elements will be noticed first
- Avoid background colors or patterns that make it difficult to read the text
- Opt for lighter background colors unless the video will be projected onto a white screen
- Use complimentary color schemes – opposites, or members of the same color wheel family

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- Consider color vision deficiency: Never use color alone to convey meaning
- Incorporate plenty of white space
- Leverage different shapes, varying sizes, and opposing values (light vs. dark) for added contrast

THIS	not THAT
 <p>Forests Definition: an area with a high density of trees</p> <ul style="list-style-type: none"> penetrable very large trees of all varieties boreal, rain, tropical, etc. any region that sustains tree growth <p>Jungles Definition: a dense forest in a hot climate</p> <ul style="list-style-type: none"> impenetrable 20% the size of a forest includes trees, vines, and other plants specifically a type of rain forest found at the edges of forests <p>“Every jungle is a forest, but not every forest is a jungle.”</p> <p><small>https://www.differ.com/differences/Forest_vs_Jungle</small></p>	 <p>Forests vs. jungles</p> <p>Every jungle is a forest, but not every forest is a jungle.</p> <p>Forests</p> <ul style="list-style-type: none"> penetrable very large trees of all varieties boreal, rain, tropical, etc. any region that sustains tree growth Definition: an area with a high density of trees <p>Jungles</p> <ul style="list-style-type: none"> impenetrable 20% the size of a forest includes trees, vines, and other plants specifically a type of rain forest found at the edges of forests Definition: a dense forest in a hot climate

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Typography and Text

Mayer's Redundancy Principle: People learn better from graphics and narration or narration and text than from all three combined

- Size of the body text should be at least 14]16px(pixels)
- Use text size for hierarchy and contrast (for example: 14px body, 24px headings, 49px title)
- Consider the meaning that font choices imply about content
- Keep simplicity in mind – pick easy to read fonts
- Use font types from the same family (keep the palette limited)
- Keep paragraphs and sentences short
- Allow for ample white space between elements (i.e. paragraphs and graphics)

THIS	not THAT
 <p>TREE FACTS:</p> <ul style="list-style-type: none"> ■ There are 60,065 species of trees on earth ■ Trees are perennial plants that need oxygen, water, and sunlight to survive ■ Some trees have flowers, but not all of them ■ Most reproduce from seeds, but some reproduce with spores or pollen cones ■ Trees prevent erosion, provide homes to wildlife, and remove carbon dioxide from the environment to create breathable air 	 <p>There are 60,065 species of trees on earth. I like trees a lot. They are my favorite thing to talk about. I really like the maple trees best – red, silver, and sugar. Sugar maples are also known as “<i>Acer saccharum</i>.” Trees are perennial plants. Trees need oxygen, water, and sunlight to survive. Some trees have flowers, but not all of them.</p> <p>Most trees reproduce from seeds, but some can reproduce with spores or pollen cones instead. Trees are good at preventing erosion, providing homes to wildlife, and removing carbon dioxide to Create breathable air. One of my favorite books as a child is the giving tree by Shel Silverstein.</p>

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Images

Mayer's Image Principle: People don't necessarily benefit from the speaker's image being added to a presentation

Mayer's Multimedia Principle: People learn better from words paired with pictures than from words alone

Mayer's Modality Principle: People learn better from graphics with narrations than from graphics with on-screen text

- Use high quality images
- Stick to a similar palette for all images (color schemes, environments, lighting, etc.)

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- Use stock photography, illustrations, or icons as appropriate to help make sense of content
- Use charts and graphs to explain complex relationships or reveal patterns and associations
- Consider using infographics to convey large amounts of information Consider pictographs or simple line drawings to explain steps and procedures
- Use full-screen images for greater impact
- Only use images that are relevant to the content (limit decoration)
- Use a consistent image style (photos, illustrations, icons, etc.)

THIS	not THAT

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Timing and Emphasis

Mayer's Signaling Principle: People learn better with cues that highlight organization of essential material

Mayer's Temporal Contiguity Principle: People learn better when corresponding words and pictures are presented simultaneously

- Synchronize related visual and auditory material to avoid splitting attention
- Use movement to emphasize where a viewer's attention should be
- Use positioning to highlight important elements (see rule of thirds under "screen layout")
- Surround important elements with white space to create emphasis
- Slightly modify repeated elements to make meaningful differences stand out
- Use visual cues like arrows and dashed lines to show viewers where to look
- Use recurring markers to direct the learning process (i.e. symbols, colors, shapes, headings, etc.)
- Bring elements into view individually when building a point visually or propelling a point forward
- Maintain a steady pace with no more than 20-30 seconds per slide (including all slide animation)

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Other Considerations

- Contemplate utilizing templates to optimize production efficiency and establish consistency and to help viewers quickly identify where to look/how things work
- Use storyboards and scripts to organize flow and ensure alignment with your overall intent
- **Don't be afraid to break the rules!** Some of the best design innovations come from thoughtful and intentional deviations from industry standards and best practices
- **Mayer's Other Principles**
 - **Segmenting:** People learn better when multimedia lessons are presented in segments or chunks rather than as one continuous piece
 - **Pre-training:** People learn better when they understand the main concepts prior to a lesson
 - **Voice:** People learn better from a human voice than from a machine or "foreign" accented voice
 - **Personalization:** People learn better from conversational styles of narration than from formal styles

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