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The Importance of Visual Presentation and Use of Color in Technical Writing

Ensuring accessibility in technical and professional writing is foundational to effective communication, with visual presentation and color use being critical components of this accessibility. Accessibility guidelines, like the Web Content Accessibility Guidelines (WCAG), offer comprehensive guidance for making content accessible and user-friendly for diverse audiences, including those with visual impairments, dyslexia, ADHD, and autism (matters close to home for me, as someone with multiple disabilities). Attention to typeface accessibility and readability is essential for inclusivity: it enhances user experience, ensures effective communication, and aligns with legal and ethical accessibility compliance. Readable typefaces improve comprehension and engagement, while clear visual design principles help users interact easily with information. Proper attention to visual presentation and color ensures that all users/readers, including those with visual impairments, can easily interpret, understand, and interact with the information or content provided.

Applicability Beyond Online Content

WCAG standards are often discussed within the context of web content; however, their principles are equally relevant to printed and static formats, such as PowerPoint presentations or PDFs. While digital accessibility discusses adapting websites for assistive technologies, such as screen readers and keyboards, content accessibility refers to how easily a user can understand any written content; it "goes beyond the language of content to include its presentation and organization" (Awad, 2024). Many individuals with visual or cognitive impairments engage with static content in both digital and physical forms. For instance, low-contrast text or dense, unformatted content in printed materials can be as inaccessible as poorly designed digital interfaces. Additionally, employing accessible, hierarchical text formatting techniques, such as bold headings and bullet points, can help users quickly identify key information and better understand the structure of the text. Therefore, I believe WCAG's guidance on accessible visual presentation and color use should be considered across all mediums where professional writing appears, not just online.

Key Recommendations for Visual Presentation

For accessible visual presentation, WCAG emphasizes providing a mechanism for users to control key elements of text display, ensuring that all users can adjust settings to fit their needs (World Wide Web Consortium, Visual Presentation, 2023). To enhance readability, users should have the option

to adjust foreground and background colors to create a comfortable contrast for reading. Additionally, the width of text blocks should be limited to no more than 80 characters per line to reduce eye strain and improve readability. Left-aligned text without justification is also recommended to prevent uneven spaces between words, which can disrupt reading flow.

Spacing plays an important role as well; line spacing should be at least 1.5 times the font height, and paragraph spacing should be at least 1.5 times larger than line spacing, making it easier for users to differentiate between lines and paragraphs. Furthermore, text should be resizable up to 200 percent without requiring users to scroll horizontally across the screen, an essential feature for those with low vision. While content itself does not need to impose these settings, the recommendation encourages content creators to design in ways that support assistive technologies, allowing users to customize their reading experience for optimal accessibility.

Key Recommendations for Color Use

Ensuring adequate color contrast is another vital WCAG recommendation. Just as contrast between text and background is important, so is contrast between other elements, such as icons, borders, and backgrounds. WCAG specifies that color contrast ratios of at least 4.5:1 are necessary for text and interactive elements. This guideline ensures that users can easily perceive and differentiate between colors, regardless of their visual abilities. For example, dark blue icons on a light yellow background provide better visibility than light blue on white, making visual cues more accessible for users with visual impairments. However, some people may not be able to distinguish differences in color at all; according to Harvard University's Digital Accessibility guidelines, this "may cause problems if your content relies on color perception and the ability to distinguish colors" (*Design for readability*, n.d.).

In terms of color use, WCAG advises not relying solely on color to convey information (World Wide Web Consortium, Use of Color, 2023). In documents like safety manuals, if important instructions are highlighted only in a specific color or two, users with color blindness may miss these cues; it's important to note that color blindness affects approximately 1 in 12 men and 1 in 200 women globally. Instead, pairing color with symbols, patterns, or otherwise formatted text such as **bold** or *italic*, ensures the message is accessible. For instance, a warning could be indicated by both a red block outline and an exclamation mark icon.

Beneficiaries of Accessible Visual Presentation and Color Use

A diverse range of users benefit from accessible visual presentation and thoughtful color use. For instance, older adults with age-related macular degeneration may rely on high contrast and adequate spacing to read effectively. Additionally, individuals with color blindness, who make up approximately 8% of the male population, require designs that do not depend solely on color differentiation. Users with cognitive disabilities, such as dyslexia, may also benefit from structured layouts and increased line spacing, which reduce visual clutter.

Application in Future Writing

In my own writing, I already prioritize accessibility by adhering to these visual presentation and color use standards. For example, I utilize the online Contrast Checker by WebAim on a daily basis to

ensure that foreground and background colors pass WCAG AAA accessibility standards. Further examples of my work include the University of Minnesota's Office of Admissions website, including margins, spacing, font, and other accessibility considerations. Incorporating these visual presentation and color use guidelines into technical and professional writing enables more inclusive and effective communication. A clear visual presentation and accessible color usage cater to diverse user needs, ensuring readability, clarity, and usability.

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