

High-Resolution Visual Channels Are Compromised by PowerPoint

A TALK, which proceeds at a pace of 100 to 160 spoken words per minute, is not an especially high-resolution method of data transmission. Rates of transmitting *visual* evidence can be far higher. The artist Ad Reinhardt said, “As for a picture, if it isn’t worth a thousand words, the hell with it.” People can quickly look over tables with hundreds of numbers in the financial or sports pages in newspapers. People read 300 to 1,000 printed words a minute, and find their way around a printed map or a 35mm slide displaying 5 to 40 MB in the visual field. Often the visual channel is an intensely high-resolution channel.

Yet, in a strange reversal, nearly all PowerPoint slides that accompany talks have much *lower* rates of information transmission than the talk itself. Too often the images are content-free clip art, the statistical graphics don’t show data, and the text is grossly impoverished. As shown in this table, the *PowerPoint slide typically shows 40 words, which is about 8 seconds of silent reading material*. The example slides in PP textbooks are particularly disturbing: in 28 books, which should use only first-rate examples, the median number of words per slide is 15, worthy of billboards, about 3 or 4 seconds of silent reading material.

This poverty of content has several sources. *The PP design style*, which uses only about 40% to 60% of the space available on a slide to show unique content, with all remaining space devoted to Phluff, bullets, frames, and branding. The *slide projection of text*, which requires very large type so the audience can see the words. Most importantly, *presenters who don’t have all that much to say* (for example, among the 2,140 slides reported in this table, the really lightweight slides are found in the presentations made by educational administrators and their PR staff).

A vicious circle results. Thin content leads to boring presentations. To make them unboring, PP Phluff is added, damaging the content, making the presentation even more boring, requiring more Phluff

What to do? For serious presentations, it will be useful to replace PowerPoint slides with paper handouts showing words, numbers, data graphics, images together. High-resolution handouts allow viewers to contextualize, compare, narrate, and recast evidence. In contrast, data-thin, forgetful displays tend to make audiences ignorant and passive, and also to diminish the credibility of the presenter. Thin visual content prompts suspicions: “What are they leaving out? Is that all they know? Does the speaker think we’re stupid?” “What are they hiding?” Sometimes PowerPoint’s low resolution is said to promote a clarity of reading and thinking. Yet in visual reasoning, art, typography, cartography, even sculpture, *the quantity of detail is an issue completely separate from the difficulty of reading*.¹⁶ Indeed, quite often, the more intense the detail, the greater the clarity and understanding—because meaning and reasoning are relentlessly *contextual*. Less is a bore.

WORDS ON TEXT-ONLY POWERPOINT SLIDES

26 slides in the 3 Columbia reports by Boeing, median number of words per slide	97
1,460 text-only slides in 189 PP reports posted on the internet and top-ranked by Google, March 2003, median number of words per slide	40
654 slides in 28 PowerPoint textbooks, published 1997–2003, median number of words per slide	15

¹⁶ Edward Tufte, *Envisioning Information* (1990), 36–51.