

Want to Know More?

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How Many Bullets Can I Have on a Slide?

Presentation software would be dead, or at least used differently, if Professor John Sweller ruled the world. He's not just worried that audiences will succumb to creeping death-by-PowerPoint. His research suggests that seeing words as they are read aloud can interfere with learning by overloading our working memory.

"It is effective to speak to a diagram," says Dr. Sweller. "But it is not effective to speak the same words that are written." The common practice of reading bullet points to an audience actually "decreases your ability to understand what is being presented."

Information design expert Edward Tufte is another critic of PowerPoint. He argues that presenting information as a series of slides makes it difficult to see relationships.

"Visual reasoning usually works more effectively when relevant information is shown side by side," claims Tufte. "Often the more intense the detail, the greater the clarity and understanding." Tufte says that "PowerPoint Is Evil" because it forces presenters to distort and dumb down information.

For an example, see Peter Norvig's reduction of the Gettysburg Address to charts and bullet points at <http://norvig.com/Gettysburg>

Are bullet points the problem?

Richard E. Mayer thinks the problem is the speaker, not the software: "Bullets don't kill learning, but improper use of bullets kills learning."

According to the psychology professor, bullet points can reduce cognitive load—the effort required to process new information. Bullets present information in easily digested chunks. They also highlight key ideas and details, which—in a well-organized presentation—helps learners see relationships among them.

And that, says Mayer, is the point of a slide presentation. Visuals should help learners process information instead of acting as prompts for speakers.

Should I use bullet points at all?

Some presentation experts advocate avoiding bullet points as much as possible. According to Robert Lane, "Having an enormous amount of text on a slide (a traditional bullet list) is one of the best ways to guarantee a powerfully negative effect on viewers. It's just not a good idea—ever."

Lane feels that bullets lock presenters into a mind-numbing sequence that "plod[s] from slide to slide." They can also interfere with learning. Humans process information through two channels: visual and verbal. Because bullet points are processed as verbal information, reading them aloud overloads the verbal channel.

Lane advocates a more interactive presentation style. (Examples can be found at <http://www.aspirecommunications.com/>). If bullet lists must be used, he advises speakers to follow each point with a real-world example.

Are there other ways to reduce cognitive load?

Bert Decker suggests that speakers remember that their slides are *not* their presentation. Instead, slides are visual representations of their ideas. When the content on a slide has been covered, presenters can reduce distractions by displaying a black slide as they discuss examples or respond to questions.

Garr Reynolds recommends that presenters "cut the noise" by preparing two versions of a presentation: simple visuals for the live audience, and a version that can stand on its own as a record of the event.

While experts disagree about how much data can fit on a slide, they agree that the quality of a presentation depends on planning, not PowerPoint. The key to successful presentations is making information easy for the audience to absorb and apply.