

# The Power of Visual Communication



Is a picture really worth a thousand words? In this age of multimedia and mass communication, it often seems so. Recent research supports the idea that visual communication can be more powerful than verbal communication, suggesting in many instances that people learn and retain information that is presented to them visually much better than that which is only provided verbally. These are welcome findings to anyone whose work involves using visual presentations to persuade or instruct others. Even more welcome is the news that today, presenters have more resources than ever available to them for creating and displaying the most visually rich programs possible.

“Something is happening. We are becoming a visually mediated society. For many, understanding of the world is being accomplished, not through words, but by reading images.”

—Paul Martin Lester,  
“Syntactic Theory of Visual Communication”

The connection between seeing and remembering

Why do people remember what they see so much more readily than what they hear? One recent article on the subject describes the evidently limitless capacity of long-term memory to store concepts and then points to studies that seem to indicate that “Pictures have a direct route to long-term memory, each image storing its own information as a coherent ‘chunk’ or concept.”<sup>5</sup> If this is so, then it follows that the more visual content in a presentation, the more memorable the information will be over the long term.

## Communicating effectively in the visual age

Visual communication is everywhere today, from electronic media like Web pages and television screens to environmental contexts such as road signs and retail displays. As the National Education Association has pointed out, “Western civilization has become more dependent than ever on visual culture, visual artifacts, and visual communication as a mode of discourse and a means of developing a social and cultural identity.”<sup>1</sup> That’s an interesting observation, but what’s even more intriguing is that there is evidence to suggest that people not only communicate visually more than ever, they also communicate better when they communicate visually. This is an important revelation to those who create presentations for work or education and who want to make those presentations as compelling and effective as possible. This paper is designed to help presenters make the most of this information by describing the evidence for the power of visual communication, identifying the key components of effective visual presentations and discussing the technologies that make it possible to use these components to craft more successful presentations.

## The case for visual communication

There is plenty of evidence from formal research studies to indicate that communication that has a visual component can be far more effective than communication that does not. Here are just a few examples.

The psychologist Jerome Bruner of New York University has described studies that show that people only remember 10% of what they hear and 20% of what they read, but about 80 percent of what they see and do.<sup>2</sup>

Training materials used by the federal government cite studies indicating that the retention of information three days after a meeting or other event is six times greater when information is presented by visual and oral means than when the information is presented by the spoken word alone. The same materials also cite studies by



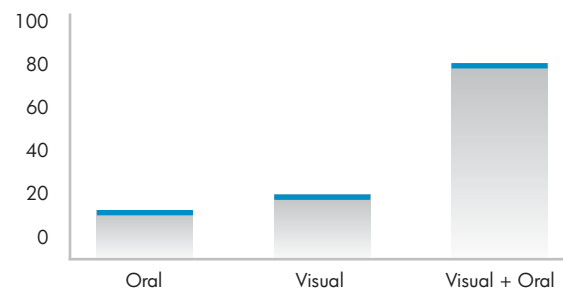
educational researchers suggesting that 83% of human learning occurs visually.<sup>3</sup>

Researchers at the Wharton School of Business compared visual presentations and purely verbal presentations and found that presenters using visual language were considered more persuasive by their audiences, 67% of whom felt that presenters who combined visual and verbal components were more persuasive.<sup>4</sup>

## The intersection of visual and verbal

Interestingly, all of the examples of the effectiveness of visual communication previously cited indicate that while purely visual communication is more effective than solely verbal communication, the most compelling communication combines both visual and nonvisual content. This is precisely the type of content for which today’s presentation software works so well. Applications like Microsoft® PowerPoint enable users to take nonvisual content and present it in a visual form that makes it more engaging. For instance, you could take the verbal information from the first research example and present it visually like this:

Oral and Visual Information: Percentage Retained



Source: Jerome Bruner, as cited by Paul Martin Lester in “Syntactic Theory of Visual Communication”



## The components of visual communication

The chart on page two is an example of one of the key components of effective visual communication: a visual interpretation of information (in this case, a chart). Other components include visual treatments of written material, color as an element in presentation material, and purely visual material.

### Visual interpretations of information

Charts, diagrams, tables, graphs and other visual interpretations of material bring together the visual and the verbal to add another dimension to the material and create an entirely new path toward understanding—or “seeing”—its meaning.

As the researcher and academician Edward R. Tufte has observed, “To envision information—and what bright and splendid visions can result—is to work at the intersection of image, word, number, art.”<sup>6</sup> Color also serves this purpose of adding another dimension, as discussed later in this paper.

### Maximizing presentation effectiveness

A presenter who uses visual interpretations of information can maximize presentation effectiveness by ensuring that the visual elements are presented as clearly and readably as possible. The more detailed and complex the information being presented, the more important this is. Choosing the appropriate projector is critical; a digital projector with a relatively high resolution is the best choice for presenting a high level of detail as clearly as possible.

## Guide to Projector Resolution

Level of Detail	Optimum Resolution
Straightforward text	800 x 600 (SVGA)
Spreadsheets	1024 x 768 (XGA)
Technical drawings, schematics	1280 x 1024 (SXGA)
Digital video	1280 x 720 or 1365 x 768 (WXGA)

## Visual treatments of written material

Adding a visual element to nonvisual communication can be even simpler than creating a chart or other graphic. The very act of taking an oral presentation, or a lecture, and putting key points into PowerPoint form is one of the most basic ways of adding the visual to the verbal. Once an oral statement is on paper, simply taking a few sentences or phrases and adding bullets or color to them adds yet more visual interest to the content—like this:

### Verbal

#### Information Retained

Studies show that people remember 10% of what they hear and 20% of what they read, but about 80 percent of what they see and do.

### Verbal + Visual

#### Information Retained

Studies show that people remember:

- 10% of what they hear
- 20% of what they read
- **80% of what they see and do**

## Color

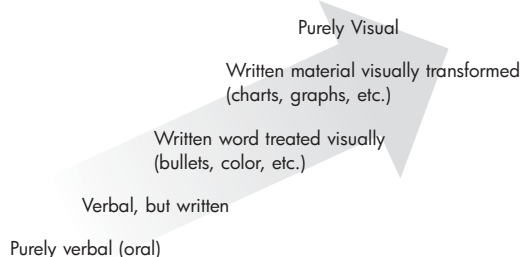
In the example we just saw, the color red is used to highlight the most significant point in the written material, adding another visual dimension to the presentation. Studies show that color can have a tremendous effect. According to researchers, color visuals increase the willingness to read 80% and can positively affect motivation and participation to the same degree.<sup>7</sup> Color also accounts for 60% of acceptance or rejection of an object,<sup>8</sup> making it a critical factor in the success of any visual presentation.

### Maximizing the impact of color

Presentation software such as PowerPoint enables presenters to create vivid color images, but that’s only part of the picture. Once the images have been created on the computer, the challenge is to ensure that the same

colors that appear on the monitor appear on the screen during presentation. If not, the results could be disastrous. Bright red arrows may appear as muted pinkish images, realistic flesh tones may seem bluish and so on. To avoid this, look for a projector that is designed specifically to provide accurate color matching and to project bright, true color images. HP has incorporated innovations into its projectors that are expressly intended to improve color matching. These DLP (digital light processing) devices include dual color wheels to optimize images and optical coatings and color algorithms to deliver richer color.

## The Spectrum of Verbal → Visual Communication



### Purely visual material

One of the advantages of an application like PowerPoint is that the user can import purely visual content into a presentation. Software architectures such as QuickTime are designed to enable seamless delivery of video clips from a variety of types of formats into PowerPoint. And static images such as photographs can also be displayed in PowerPoint through formats such as GIF, JPG and BMP.

Theoretically, a presentation could incorporate all of the elements on the continuum of verbal to visual communication, such as a PowerPoint presentation that includes:

- simple written statements on slides
- visual treatments of written statements
- charts, graphs and other interpretations of verbal material
- imported visuals such as video clips or still photographs
- live commentary as the presentation is being made

The wisdom of including every single element in one presentation might be questionable, though. "Remember, you want the audience's attention to stay focused on the content," cautions one guide to creating effective

presentations, "and if a variety of moving bullets, movies and/or sounds play simultaneously (or at least so quick as to be undifferentiable)...people will pay attention to the multimedia and ignore the content completely."<sup>9</sup>

## Summary

The ability to use visuals to communicate more powerfully is an invaluable resource for today's presenters. With a wealth of choices of components to incorporate into presentations and with sophisticated new tools for creating and displaying these materials, they are well equipped to make their presentations more dynamic and compelling than ever before.

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### Notes

- 1 "Thriving in Academe: A Rationale for Visual Communication," National Education Association Advocate Online, December 2001.
- 2 Paul Martin Lester, "Syntactic Theory of Visual Communication," California State University at Fullerton, 1994-1996.
- 3 "Presenting Effective Presentations with Visual Aids," U.S. Department of Labor, OSHA Office of Training and Education, May 1996.
- 4 "Effectiveness of Visual Language Presentations," MacroVU, Inc., [www.macrovu.com](http://www.macrovu.com).
- 5 "DIMP: The Use of Images to Support Instruction and Presentations," Technical Advisory Service for Images (TASI), 2002-2004.
- 6 Edward R. Tufte, *Envisioning Information*, Cheshire, Connecticut: Graphics Press, 1990.
- 7 Ronald E. Green: "The Persuasive Properties of Color," Marketing Communications, October 1989.
- 8 Morton Walker, *The Power of Color*, Avery Publishing Group, 1993.
- 9 Michael A. Russell and Walter M. Shriner, "Creating Effective PowerPoint Presentations," Mt. Hood Community College, Gresham, Oregon, 2001.

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