

# Multimedia Learning Theory Applied to Presentations

## 1. Honor the Limits of Working Memory

Most people either learn nothing or learn bits and pieces of what you share. Memory is the critical element that determines how well new information is received, processed and stored.

Short term memory and long term memory are unlimited.

**Working memory is limited and actually holds only 3-4 items.** When you are delivering a presentation, that information is stored in working memory. If an audience member's working memory is full, the excess information will just disappear.

To help people learn, **break information up into meaningful chunks** that are organized in a logical, progressive way. Each chunk should essentially contain one concept.

## 2. Avoid Overloading the Verbal Channel

People receive and process new visual and verbal information in two separate, but related channels:

- **Images** travel through the **visual** channel.
- **Narration** travels through the **verbal** channel.
- **Onscreen text** is verbalized by the working memory and also sent through the **verbal channel**.

When onscreen text is the same as what is narrated, it creates redundancy, splits the audience's attention, reduces the capacity of the working memory and ultimately decreases understanding and learning.

Multimedia learning research has proven that **people understand better when words are presented as a verbal narrative instead of as onscreen text.**

## 3. Use Images that Illustrate Not Decorate

Research has also proven that **visuals can improve learning**, but only **if they illustrate the point you are making.**

Irrelevant, decorative visuals actually decrease learning. Images should support the narrative and illuminate your story.

# Applying Theory to Slide Design

## 1. Move Most of the Words to Your Notes

Humans are completely incapable of reading and comprehending text on a screen and listening to a speaker at the same time.

## 2. Have Only One Point for Each Slide

This approach also gives the viewer room to think and to own what you are presenting.

### 3. Choose 3 Main Points

This strategy helps to guide their attention and to increase the likelihood that they'll remember the important points.

Make it clear what the important points are. Ask yourself, "What do I want them to remember, if they don't remember anything else?"

## Prepare and Rehearse

### 1. Write Your Script before Opening PowerPoint

Although the right visuals enhance learning, your content is king. Make sure your presentation flows logically and tells a story.

### 2. Prepare Effective Handouts

The slides are your speaker support material and if you've designed them properly, they should be incapable of standing by themselves. Prepare an actual handout that will be helpful to people long after they've left your presentation (*Hint: like this one*).

### 3. Practice

Practicing will greatly improve your delivery and ability to connect with your audience.

#### **Presentation Photo Credits**

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# Recommended Resources

## Books

*slide:ology: The Art and Science of Creating Great Presentations* by Nancy Duarte

<http://blog.duarte.com/book/>

*Presentation Zen: Simple Ideas on Presentation Design and Delivery* by Garr Reynolds

<http://www.presentationzen.com/>

*Presentation Zen Design: Simple Design Principles and Techniques to Enhance Your Presentations* by Garr Reynolds

*The Back of the Napkin: Solving Problems and Selling Ideas with Pictures* by Dan Roam

<http://www.thebackofthenapkin.com/>

*Beyond Bullet Points: Using Microsoft® Office PowerPoint® 2007 to Create Presentations That Inform, Motivate, and Inspire* by Cliff Atkinson

<http://www.beyondbulletpoints.com/>

*The Presentation Secrets of Steve Jobs: How to Be Insanely Great in Front of Any Audience* by Carmine Gallo

*Made to Stick: Why Some Ideas Survive and Others Die* by Chip Heath and Dan Heath

<http://www.madetostick.com/>

## Websites

### Presentation Development and Design

Excellence in Presentations, <http://nobullets.wordpress.com>

PowerPoint Ninja, <http://www.powerpointninja.com>

Rethink Presentations, <http://www.rethinkpresentations.com/>

SlideMagnet, <http://www.slidemagnet.com/>

Speaking about Presenting, <http://www.speakingaboutpresenting.com>

Sticky Slides, <http://stickyslides.blogspot.com>

The Virtual Presenter, <http://www.thevirtualpresenter.com>

Think Outside the Slide: Communicate effectively using PowerPoint, Dave Paradi

<http://www.youtube.com/user/ThinkOutsideTheSlide>

### Images Sources

Flickr, <http://www.flickr.com/> (free – make sure you search for creative commons photos)

Microsoft Clipart Gallery, <http://office.microsoft.com/en-us/clipart/default.aspx> (free)

morgueFile, <http://www.morguefile.com/> (free)

iStockphoto, <http://www.istockphoto.com>

stock.XCHNG, <http://www.sxc.hu/> (free)

More... [http://presentationzen.blogs.com/presentationzen/2006/01/where\\_can\\_you\\_f.html](http://presentationzen.blogs.com/presentationzen/2006/01/where_can_you_f.html)

## Videos (What This Approach Looks Like)

Authors@Google: Garr Reynolds (1:11)

<http://www.youtube.com/watch?v=DZ2vtQCESpk>

Inbox Zero, Merlin Mann (58.42)

<http://www.youtube.com/watch?v=z9UjeTMb3Yk>

Larry Lessig on laws that choke creativity (15:59)

[http://www.ted.com/talks/lang/eng/larry\\_lessig\\_says\\_the\\_law\\_is\\_strangling\\_creativity.html](http://www.ted.com/talks/lang/eng/larry_lessig_says_the_law_is_strangling_creativity.html)

Merlin Mann on Time and Attention, Getting Things Done (35.22)

<http://www.youtube.com/watch?v=uOgHE5nEq04>

Seth Godin on standing out (17:04)

[http://www.ted.com/talks/lang/eng/seth\\_godin\\_on\\_sliced\\_bread.html](http://www.ted.com/talks/lang/eng/seth_godin_on_sliced_bread.html)

## Articles about Presenting

Make Yourself Presentable

<http://jasonsantamaria.com/articles/make-yourself-presentable/>

The Size of Your Deck is Not Important

[http://www.presentationzen.com/presentationzen/2005/12/the\\_size\\_of\\_you.html](http://www.presentationzen.com/presentationzen/2005/12/the_size_of_you.html)

"Slideuments" and the catch-22 for conference speakers

[http://www.presentationzen.com/presentationzen/2006/04/slideuments\\_and.html](http://www.presentationzen.com/presentationzen/2006/04/slideuments_and.html)

Top Ten Slide Tips

<http://www.garreynolds.com/Presentation/slides.html>

What's Good PowerPoint Design?

[http://www.presentationzen.com/presentationzen/2005/09/whats\\_good\\_powe.html](http://www.presentationzen.com/presentationzen/2005/09/whats_good_powe.html)

## Articles about Creating Better Charts

Nine Steps to Simpler Chart Formatting

<http://peltiertech.com/WordPress/9-steps-to-simpler-chart-formatting/>

Ten Chart Design Principles

<http://peltiertech.com/WordPress/ten-chart-design-principles-guest-post/>

