



Teaching with Technology: Advisory #1

A Service of the Center for Teaching and Learning Technology

Effective PowerPoint Presentations

KISS is an oft-repeated acronym for "Keep It Simple, Stupid." When preparing slideshows in PowerPoint or similar presentation-oriented software packages, this notion is especially true. PowerPoint has so many features it can be tempting to try and use them all--sometimes on a single slide. While there are doubtless teaching situations that mandate a visual and audio extravaganza, most of us need to learn to show restraint when it comes to infusing multimedia elements into our presentations. If there are too many extraneous items to attend to during a presentation, your student's attention may drift. Alternately, if every bulleted item is introduced with a sound effect, your audience will likely turn ugly just a few minutes into a class and your presentation will be remembered for all the wrong reasons.

Here are some guidelines that will help you create effective rather than defective PowerPoint presentations.

The Joy Of Six

Comically named, this principle of effective design is meant to remind the presenter that slides should not tell the complete story. PowerPoint presentations help provide an overall structure to our classes--talking points, if you will. However, a professor's presentations are rarely meant to be something that can stand alone. We need to be there to explain them and expand upon the content they contain.

More a guideline than a rule, The Joy Of Six indicates that effective slides typically feature:

1. About six bulleted items per slide
2. Each with about six words per bullet

Rules are meant to be broken and there are times when The Joy Of Six simply can't apply. For example, if you were to include a quotation on a slide you, wouldn't want to

trim it down to just six words. In most presentations and on most slides though, it works very well.

Bigger is Better

How big does the text on your slides need to be in order to be seen? A general rule of thumb for text sizes is that:

1. Slide title text should be set in 36 point size or larger font sizes
2. Body, bullet or paragraph text should be set in 24 point or larger sizes

For those of you not familiar with the typesetter's term **point**, it is equal to 1/72 of an inch. Thus, a 72-point font size produces characters 1 inch high in print. A 36-point font size produces half-inch high letters.

We strongly suggest that you actually preview some sample slides and font sizes in any new teaching venue; but, when you can't prepare and test your presentations in advance, the 36/24-point guideline seems to work well. Another quick test is to print out a sample slide on an 8x10 sheet of paper, place it on the ground at your feet and stand up. If you can read the text on the slide comfortably, then your audience should be able to read it when it's projected on a screen.

Speaking of fonts and sizes, many people are not aware of the differences between serif and sans-serif fonts. More importantly, they are not certain when or why to use a specific font. Etymologically, the only thing you can determine is that serif fonts have something sans-serif fonts don't, but what exactly is that?

As you can see below, serif text features small embellishments on the corners and edges of the letterforms. Those extra "strokes" are called serifs. While sans-serif fonts are smooth--featuring straight lines and simple curves.

Serif

Sans-Serif

Apart from their obvious physical differences, serif and sans-serif fonts have specific applications. Sans-serif fonts are dramatic and demand the eye's attention. That's one reason why headlines on newspapers and supermarket tabloids are always set in large sans-serif type.

However, the very thing that makes sans-serif fonts dramatic also makes them difficult to read--especially if the size is small. That's why small type in newspaper and magazine columns and in paperback books is invariably set in a serif font. Serif fonts, and the small embellishments they contain, help the eye move from one letterform to the next and lessen the severity of what are known as saccades. Saccades are the movements that your eye makes in order to jump from one fixation point to the next. Like script handwriting, serifs on letterforms help create a visual flow to the text that softens the severity of the

saccades. In short, serifs provide a sort of "shock absorber" for your eyes--enabling you to read more easily for longer periods.

For most slide presentations we tend to use sans-serif fonts. Since our slides are generally Joy-of-Six compliant, there isn't all that much sustained reading and, because we want the audience to see it, the type is set large.

Unfortunately the names given to typefaces and fonts often do not indicate whether they contain serifs or not. Arial and Helvetica are two of the most frequently used sans-serif fonts, while Times and New Century SchoolBook are quintessential serif fonts. When in doubt, a quick visual inspection should resolve any serif-related pedigree questions.

There is an amusing experiment that you can do to illustrate the different type of eye movements that your body can make. You'll need a partner for this one; you can't do it by yourself.

With your partner facing you, ask them to observe your eyes as you move them from the far left of your visual field to the far right--just as if you were daydreaming and letting your eyes track without looking at anything in particular. Don't move your neck. Just sweep your eyes left and right and back again. Ask your partner what they saw.

Now, we're going to alter the experiment in a seemingly trivial way. This time, instead of just letting your gaze drift, hold your finger up at arm's length from your eyes and follow it as you move your finger across your visual field from left to right. Again, keep your neck fixed. Follow your finger with your eyes alone. Ask your partner what they saw.

If all has gone properly, the observer should report that when you moved your eyes without something to follow they saw the jerky, saccadic movements we've been talking about. When your eyes were following your finger, they should have moved in a perfectly smooth manner.

It turns out that your eyes are capable of only those two types of movements. One, as you now know, is called a saccade; the other is called a smooth-pursuit movement. As evolution would have it, in order for your eyes make a smooth-pursuit movement, there has to be something to look at--like a moving target. Without that input to your brain, the default type of movement is a saccade. It's something you may want to consider mentioning to your students. It's fun to do during a short break and educational as well as many students also misuse serif and sans-serif fonts in their work.

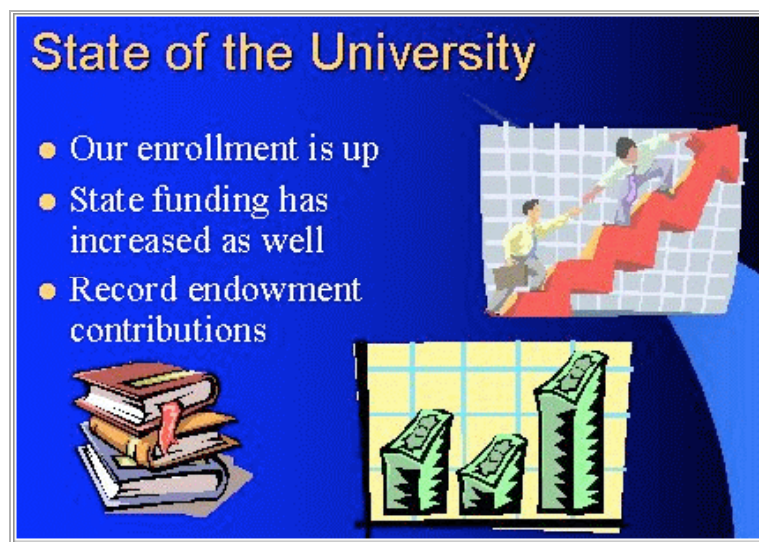
We can summarize some heuristics for using text and graphics effectively on your slides as follows:

Use type intelligently

1. Limit type faces and sizes
 1. Sans-serif fonts like Arial or Helvetica usually work best
 2. Limit the number of fonts used in a presentation to three or less
2. Use fonts consistently throughout your slides for titles, major points, etc.
3. Use font size and indents to naturally organize information on the slide from topic to subtopic
4. Avoid using all UPPERCASE or numerous special effects
5. Choose common fonts (like Arial) if you need to deliver your presentation on someone else's computer--they may not have the same fonts available

Use visuals appropriately

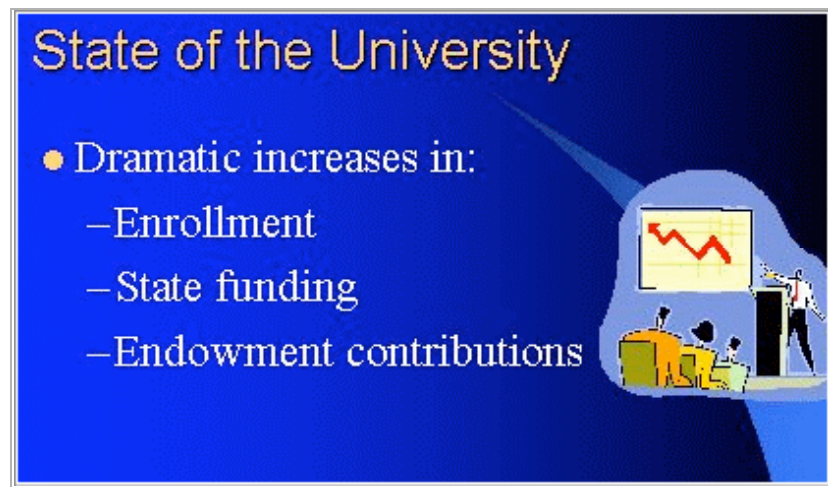
1. Visualize verbal information with graphics when possible
2. Support text with pictures, diagrams, tables, graphs or charts
3. Use visuals that are directly related to the immediate and intended learning
4. Use simple and clear visuals



An example of cluttered design and unrelated graphics that don't follow natural eye movement.

Keep your design simple

1. Focus on one major idea or concept per screen
2. Avoid gimmicks or unrelated special effects that don't contribute to the idea or concept
3. Design slides to follow natural eye movements -- flow information from top left to bottom right
4. Locate information consistently on your slides (a good reason to use slide master templates)



An example of the use of a single point of emphasis—the concept of “increasing,” graphics that direct you toward important information, better use of space and application of the Rule of Thirds.”

Rule of thirds

1. Mentally "draw" two equally spaced vertical lines and two horizontal ones over the top of an image or photograph. These lines will make your picture look like a Tic-Tac-Toe board and, if properly placed, should divide your image into thirds.
2. Note the points where these lines intersect and place text, illustrations, pictures on or near those intersections.
3. Off-center placement is more compelling to the eye than centered text or graphics



Rule of Thirds

Use color sparingly

1. Limit the number of colors on a slide to about five
 1. 1 background color
 2. 2 text colors
 3. 2 accent colors

2. Use highly contrasting colors (opposites on a color wheel work best)
 1. Example: black, dark gray or dark blue background with yellow or white text
 2. Example: white, light gray or light yellow background with black or blue text
3. Use color consistently
4. Be careful with gradient backgrounds -- they sometimes make text hard to read
5. Black on pure white can be stressful to the eyes (especially in a darkened room) so decrease the degree of contrast between the text and background to soften visual stress
6. Use bright colors to heighten attention
7. Avoid red text, except for accenting or highlighting -- red is hard to read
8. Use color as a cueing device to emphasize important words or phrases
9. Use color for contrast, perhaps to highlight differences or indicate distinct sections
10. Avoid placing dark or medium blue text on a black background. The human eye has fewer blue receptors compared to other colors and cannot distinguish the boundaries as well.

Have you done something interesting in the classroom with PowerPoint that you'd be willing to share with the UAEU community? Do you have additional insights into this or other educational technology topics? If so, please contact chris.stryker@uaeu.ac.ae

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