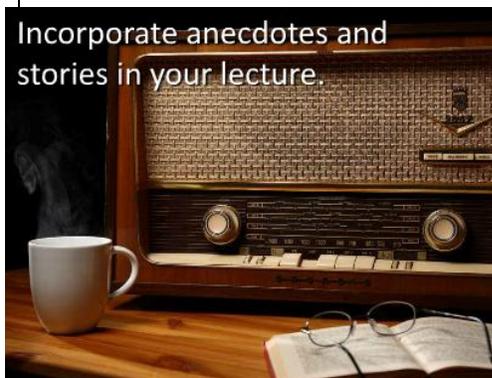## Visual Thinking in the Classroom (1)
Images as metaphors

Aziza Ellozy, Director, Center for Learning & Teaching

I have just returned from the 2011 annual meeting of the Professional Organizational and Development Network (POD) in Atlanta, where in addition to giving a presentation, I had the privilege of attending several faculty development sessions. One presentation in particular attracted my attention, "*Everyone's a visual learner: using visual thinking in the classroom*" by Derek Bruff and Jose Vasquez (Bruff and Vasquez, 2011). In a very engaging and interactive session, they made the case for visual thinking and shared all types of visualization tools that could be used for student activities and classroom presentations. I would not do it justice if I were to try and describe the session in this newsletter, but if you are interested, you will find the link to the presentation at the end of this short article.

Grab students' attention with your opening. START FINISH Finish forcefully.

Make the organization of your lecture explicit.

Incorporate anecdotes and stories in your lecture.

Maintain eye contact with the class.

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Many of our faculty use the tools that Dr. Bruff and Dr.Vasquez mentioned in the presentation, including timelines, concept maps, mind maps and graphics. Others make use of data visualization tools in order to make sense of very large and complex data sets in statistical analysis or in the analysis of non-numerical data such as text.
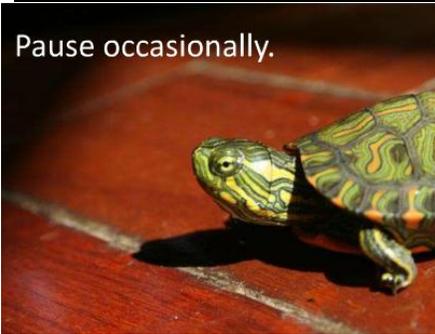
A few of weeks ago, I was pleasantly surprised to see our estimable Dr. Ali Hadi, an expert in data mining and visualization, sitting among the participants in the CLT's workshop on concept maps. In response to the question I posed to all participants, "what is your interest in this workshop", he answered, "I am interested in anything that has to do with visualization." This prompted me to think that visual thinking is a subject matter worth sharing with our faculty

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[1] Derek Bruff, Assistant Director, Center for Teaching, Senior Lecturer, Department of Mathematics, Vanderbilt University. Reprinted with permission.
Attributions for images are given in the Slideshare version of the presentation (http://www.slideshare.net/derekbruff/lecturing-basics)

at large through the venue of this newsletter. Hence this is the **first in a series** of articles that will explore the potential of integrating visual thinking in teaching and learning.

As someone who uses quite a bit of images in my presentations, I was inspired by the use of "images as metaphors" in Dr. Bruff and Dr. Vasquez' presentation and thought it would be a good start to this series. Searching the Internet, I came across Dr. Bruff's "**Eight Lecturing Basics,**" which I thought would be a perfect example of a PowerPoint presentation that uses images as metaphors (reprinted here with his permission). Presentations very often suffer from information overload, and the message here is "simplify and amplify" as the brain takes time to process information.

Visual metaphors are nothing new and have been widely used for rhetorical purposes. They are heavily utilized in advertising, where the power of images, whether they are on their own or accompanied by words, is used to persuade. Sankey (2002) and others suggest that the opportunity to facilitate higher learning by using images as metaphor should not be ignored.

Because metaphors depend on higher cognitive skills that make use of the ability to categorize and to make analogies, asking students to come up with their own metaphors or to interpret somebody else's forces them to draw upon their creative and critical thinking skills simultaneously. In addition, images can be used to illustrate subjective or abstract concepts to arouse emotion. According to cognitive scientist D. Willingham, an added bonus is the effect visual metaphors have on memory: "things that create an emotional reaction will be better remembered" (Willingham, 2009).

On a different note, the participants in the aforementioned POD presentation were given a very useful link to a search engine[2] for images. This search engine has the added option of narrowing search results to images that have a "Creative Commons" license, so that you do not need to worry about violating copyright. For those of us who had our computers with us, we were asked to think of a concept that our students find difficult to understand and to type it in the search field. I typed in "falsifiability," a concept that students in my class, "Scientific Thinking," have a hard time grasping, and it turned up the image of a black swan – a great springboard to engage students in a discussion. But the most interesting image came to my neighbor who had typed in "iambic pentameter." I don't think I will ever forget what an iambic pentameter is after I saw the image that came up.

Sources

- Buff, Derek. "Eight Lecturing basics From Barbra Gross Davis' Tools for Teaching." *Center for Teaching Vanderbilt University.* PowerPoint. 2010
- Bruff, Derek, and Jose Vasquez. "Everyone." Prezi. N.p., 28 Oct 2011. Web. 20 Nov 2011. <http://prezi.com/rxbjwhdvic2l/everyones-a-visual-learner/>.
- Sankey, Michael. "Considering Visual Literacy When Designing Instruction." e-Journal of Instructional Science and Technology. 5.2 (2022): 1-14. Web. 20 Nov. 2011.
- Willingham, Daniel. Why Don't Students Like School?; a cognitive scientist answers questions about how the mind works and what it means for your classroom. San Francisco: Jossey-Bass, 2009. Print.

[2] www.compfight.com