Learning Through Visuals

Visual imagery in the classroom

A large body of research indicates that visual cues help us to better retrieve and remember information. The research outcomes on visual learning make complete sense when you consider that our brain is mainly an image processor (much of our sensory cortex is devoted to vision), not a word processor. In fact, the part of the brain used to process words is quite small in comparison to the part that processes visual images.

Words are abstract and rather difficult for the brain to retain, whereas visuals are concrete and, as such, more easily remembered. To illustrate, think about your past school days of having to learn a set of new vocabulary words each week. Now, think back to the first kiss you had or your high school prom date. Most probably, you had to put forth great effort to remember the vocabulary words. In contrast, when you were actually having your first kiss or your prom date, I bet you weren't trying to commit them to memory. Yet, you can quickly and effortlessly visualize these experiences (now, even years later). You can thank your brain's amazing visual processor for your ability to easily remember life experiences. Your brain memorized these events for you automatically and without you even realizing what it was doing.

There are countless studies that have confirmed the power of visual imagery in learning. For instance, one study asked students to remember many groups of three words each, such as dog, bike, and street. Students who tried to remember the words by repeating them over and over again did poorly on recall. In comparison, students who made the effort to make visual associations with the three words, such as imagining a dog riding a bike down the street, had significantly better recall.

Various types of visuals can be effective learning tools: photos, illustrations, icons, symbols, sketches, figures, and concept maps, to name only a few. Consider how memorable the visual graphics are in logos, for example. You recognize the brand by seeing the visual graphic, even before reading the name of the brand. This type of visual can be so effective that earlier this year Starbucks simplified their logo by dropping their printed name and keeping only the graphic image of the popularly referred to mermaid (technically, it's a siren). I think we can safely assume that Starbucks Corporation must be keenly aware of how our brains have automatically and effortlessly committed their graphic image to memory.

So powerful is visual learning that I embrace it in my teaching and writing. Each page in the psychology textbooks I coauthor has been individually formatted to maximize visual learning. Each lecture slide I use in class is presented in a way to make the most of visual learning. I believe the right visuals can help make abstract and difficult concepts more tangible and welcoming, as well as make learning more effective and long lasting. This is why I scrutinize every visual I use in my writing and teaching to make sure it is paired with content in a clear, meaningful manner.

Based upon research outcomes, the effective use of visuals can decrease learning time, improve comprehension, enhance retrieval, and increase retention. In addition, the many testimonials I hear from my students and readers weigh heavily in my mind as support for the benefits of learning through visuals. I hear it often and still I can't hear it enough times . . . by retrieving a visual cue presented on the pages of a book or on the slides of a lecture presentation, a learner is able to accurately retrieve the content associated with the visual.

Sources:

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