

# DIY NeuroELT References

updated 6/2014

These are references for the information included in presentations on *DIY NeuroELT: Making your textbooks more brain-friendly*.

Books marked with “\*” are ones I recommend, especially if you are just getting started in reading about the subject.

## Introduction

We use only 10% of our brains is a myth (p. x).

The brain is like a sieve. We discard 99% of sensory information almost immediately (p. 112).

Wolfe, Patricia. (2010) *\*Brain Matters: Translating research into classroom practice, 2<sup>nd</sup> ed.* Alexandria, VA, USA: ASCD (Association for Supervision and Curriculum Development). For more on common fallacies, search online for “neuromyths”.

## Go for emotion

Neurotransmitters increase focus, memory and motivation: Willis, Judy in *The current impact of neuroscience on teaching and learning*. In Sousa, David A (ed.) *Brain, Mind and Education: Neuroscience implications for the classroom*. Bloomington, IN, USA: Solution Tree Press, p.54

Neurotransmitters activate the “learning centers” in the brain: Achor, Shawn. (2010) *The Happiness Advantage: The Seven Principles of Positive Psychology That Fuel Success and Performance at Work*. New York: Crown Business (Random House), p.44.

Comprehensible input. Krashen, S. (2013). Should We Teach Strategies?. *Electronic Journal of Foreign Language Teaching*, 10(1). (contrasted with “compelling input.”).

## Give learners choices

It is the perception of choice that stimulates the brain. Rock, David (2009). *Your Brain at Work*. New York: HarperCollins, pp. 123-125.

But don't give too many choices: Schwartz, Barry (2004). *The Paradox of Choice*. New York: HarperCollins, p. 2. (He says it on page 2 but the whole book is about this.)

## The brain likes novelty

We don't pay attention to boring things: Medina, John. (2014) *\*Brain Rules: 12 Principles for surviving and thriving at work, home and school. 2<sup>nd</sup>ed.* Seattle, WA, USA: Pear Press, p. 103 (was p. 94 in 1<sup>st</sup>/ed.). Note: This book has a fantastic website with summaries, videos, etc.

Brain as pharmacy metaphor. Brizendine, L. (2007). *The female brain*. New York: Broadway Books/ Random House LLC.

## Teach across the senses

Multi-sensory input leads to greater recall and more creative thinking, Medina, John. (2014) *\*Brain Rules: 12 Principles for surviving and thriving at work, home and school, 2<sup>nd</sup>ed.* Seattle, WA: Pear Press, p. 172 (was p. 208 in 1<sup>st</sup>/ed).

The information about memory with auditory only, visual only and auditory plus visual from Medina's website: <http://brainrules.net/vision?scene=>

Go to slide 3: *A rule of thumb for presenters*.

Sit for 20 minutes and blood builds up in the feet and buttocks. Stand and move for one minutes and there is a 15+ increase in blood to the brain: Sousa, David A. (2011) *\*How the Brain Learns*. 4<sup>th</sup> ed. Thousand Oaks, CA, USA: Corwin Press, p. 34.

### **The brain needs challenge.**

“Work that interests students will necessarily be at an appropriate challenge level.” Sousa, David A. (2011). *Differentiation and the Brain*. Bloomington, IN: Solution Tree Press, p. 114. Also see Csikszentmihalyi, M. (1997) *Finding Flow*. New York: Basic Books, p. 30.

### **Let learners create**

Creativity is “the process of having original ideas that have value.” Robinson, (Sir) Ken. From Robinson’s TED.com talk “Ken Robinson says schools kill creativity.” Go to TED.com and search for his name and you’ll find it. The quote is at 13:27 (But you really will want to watch the whole talk).

Creative intelligence is ““The ability to see how to do things or think about something in multiple ways.” - Caine, Renate Nummular; Caine, Geoffrey; McClintic, Carol & Klimek, Karl (2009) *12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain*. Thousand Oaks, CA, USA: Corwin Press, p. 244.

### **Praise effort, not ability / intelligence**

Students who are praised for effort– 90% chose more challenging tasks. Dweck, Carol (2008). *Mindset: The new psychology of success*. New York: Ballantine Books. p.72.

### **Personalize.**

Personal experience increases memory. Caine, Renate Nummela; Caine, Geoffrey, McClintic, Carol Lynn McClintic; Klimek, Karl (2009) *12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain*. Thousand Oaks, CA, USA: Corwin Press, p. 204.

Encode memories/ Language processing. Bergen, B. K. (2012). *Louder than words: The new science of how the mind makes meaning*. New York: Basic Books.

Sole purpose of memory is to imagine the future. Schacter, D. L. (2002). *The seven sins of memory: How the mind forgets and remembers*. Houghton Mifflin Harcourt.

Another good book is:

Willis, Judy (2006) *\*Research-Based Strategies to Ignite Student Learning: Insights from a Neurologist and Classroom Teacher*. Alexandria, VA, USA: ASCD

There are many resources at **www.fab-efl.com** Especially see the books and videos sections.

(June 2014)

<http://helgesenhandouts.weebly.com/diy-neuro-elt.html>

OR: **www.tinyurl.com/neuroELT**