**Brain Rules**

**by John Medina**

**Seattle, Washington; Pear Press. 2008**

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Written by John Medina, *Brain Rules-12 Principals for Surviving and Thriving at Work, Home, and School* makes us rethink the way we learn and challenges us to examine our practices at work, home, and school so that they align with the needs of our brain. According to Dr. Medina, “we should learn to make friends with our brains and learn to work with them, not against them.” In order to make learning “sticky” Heath (2012), we must attend to the whole person and ensure that it is relevant to the audience, attend to the multiple intelligences of our learners by providing learning opportunities using multiple modalities, appeal to the emotions of our students, and create a safe learning environment.

Medina’s book is divided into twelve “rules” of how the brain functions and then incorporates a memorable hook that illustrates an important aspect of the brain rule. He then explains the science behind the rule and provides ideas about how we can take action so that we maximize learning. He incorporates personal stories and catchy research examples to help demystify the science and make it meaningful to any reader.

**What are Brain Rules?**

There are twelve rules that Medina says we must follow: Rule #1: Exercise boosts brain power, Rule #2: The brain has evolved for survival, Rule #3: Every brain is wired differently, Rule #4: Attention is short and the brain does not learn boring things, Rule #5: For short-term memory, we need to repeat to remember, Rule #6: For long-term memory, we need to remember to repeat, Rule #7: If we sleep well, we think well, Rule #8: Stressed brains don’t learn the same way, Rule#9: Sensory integration is important to stimulate all of the senses, Rule#10: Vision trumps all other senses, Rule #11: Gender, male and female brains think differently, Rule #12 We are powerful natural explorers.

Medina states that one of the most important brain rules is curiosity and the need to tap into this powerful desire for exploration in education. When we make new connections, it strengthens existing connections and even creates new neurons, allowing all of us to be life-long learners. Medina reminds us that we need to do a better job of encouraging life-long curiosity. How can we do this? Could Project Based Learning help use our natural inclination of curiosity as a catalyst for learning?

Markham (2012) describes project-based learning (PBL) as: " PBL integrates knowing and doing. Students learn knowledge and elements of the core curriculum, but also apply what they know to solve authentic problems and produce results that matter. PBL refocuses education on the student, not the curriculum--a shift mandated by the global world, which rewards intangible assets such as drive, passion, creativity, empathy, and resiliency. These cannot be taught out of a textbook, but must be activated through experience."  It seems that neuroscience and Project Based Learning could be the perfect compliment to each other and offer the “start-over” that Medina talks about is needed in education. Edutopia’s article, *Six Tips for Brain-based Learning*, discusses just that “by combining project-based learning with neuroscience, you can offer students an opportunity to follow their curiosity and engage their creativity when it comes to understanding the brain.” What can be more personally relevant and inspiring than learning about how your own brain learns best?

**Integrating Brain Rules into Student Education and Conclusion**

How can we put the knowledge learned to practical use in student education? Medina says, “If you want to create an educational environment that was directly opposed to what the brain was good at doing, you would probably create a classroom, and in order to change things, you may have to tear it down and start over.” I think that is where we are in education. It is not simply about reform, but rather reinventing a new educational paradigm that listens and responds to brain-based research and believes all students can learn when presented with multiple modalities to access meaning. How best to do this than through project based learning? It is exciting to think about where education is headed and the possibilities for learning are endless now that we are armed with research provided by Medina and others on how to best support student learning.

References:

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