

More on Brain-Based Learning as Part of Student Centered Learning for Educators
By Peter J. Foley Ed.D, editor-and-chief

Brain-based learning should[WU1] be considered an integral part of student centered learning. Brain-based learning means using our knowledge of how the brain works in order to make our teaching more effective. The purpose of this article is to underscore the importance for teachers of using learning sciences[WU2] in order to teach more effectively.

In previous articles I have written for SCLThailand, Harvard professor Howard Gardner's theory of seven distinct intelligences has been discussed. The discussion revolved around the extent to which students possess different learning styles. Some learners, for example, learn better from hearing, as they are auditory learners, some learn better visually; they are known as visual learners.

Building on our knowledge of different learning styles, the purpose of this article is to give some very specific examples of how a teacher should consider adapting their teaching methods to take advantage of how the brain functions, that is, how we learn.

For these examples, I turn to the work of Eric Jensen, a professor at the University of Hawaii. In his article "Brain-Based Education in Action", Jensen provides three vivid illustrations [WU3]:

1. We are born "hard wired", with few emotions, no more than a dozen. We must learn the rest. For K-5 teachers especially, this knowledge is crucial, since emotions like respect for the teacher and fellow students, shame for rude or inappropriate behavior, or remorse for hitting another classmate must be taught. This means that the teacher [WU4] "must teach the appropriate emotional response not criticize students who lack them." Teachers who understand this stop demanding that their students act a certain way and instead start teaching them how to respond.¹ For example the widely used socio-emotional "Kimochois" program used in international schools in the Asia Pacific region and in Australian government schools in the Early Years, is an excellent example of a structured socio emotional program endeavoring to help students deal with such issues.
2. The brain is "hard wired" to pay attention to anything related to survival. Such things as sudden movements, flying objects, other children and novel sounds. So the lesson here is to stop just telling students to pay attention and provide what I call learning distractions. I recall observing a dynamic young male teacher who kept the attention of his forty junior high school aged students inside a UNICEF tent with temperatures inside the tent of 95 and 110 degrees Fahrenheit. It was in the Jalozai refugee camp just outside Peshawar, Pakistan. The young teacher kept the attention of the students by darting around the classroom asking rapid fire Socratic questions and throwing a bean bag to students he wanted to answer the question.
3. The final example is the use of the brain research that links physical activity with cognition. The success of the bean bag technique above makes use of this knowledge too. What Jensen wants us to appreciate is that to exercise is [WU5] "highly

correlated with neurogenesis, the production of new brain cells.” When I taught high school students and I saw students losing interest in the class I would suddenly stop what I was teaching and break into a vigorous game of Simon Says. Students would thus stand and sit, wave their arms, jog in place and wag their heads. After finishing five minutes of this game of constant movement, I would continue with the lesson. The attention of the students was recaptured. I did not know anything about brain based learning at that time, but teachers often know these brain-based teaching techniques intuitively. For illustration, many decades ago I was teaching remedial reading to brain impaired and emotionally disturbed junior high aged students. I had the whole class periodically get up and dance. Similar techniques are used in teaching phonics. Now Harvard University research has shown how dance has beneficial effects on the brain.
(See “10 Brain-Based Strategies” by visiting: <http://www.jensenlearning.com>)².

My point in citing the bean bag teaching technique and dancing technique is that teachers and parents often have intuitive senses on how best to teach a child and thus often gravitate naturally to brain friendly methods of teaching. Thus, there is much to learn not only from behavioral and brain scientists, but also from teachers and parents about effective learning techniques.

What I hope my fellow teachers will take away from this article is a brain-based approach to planning their lessons that accounts for the individual differences of those in their classes. Some of the answers about how to achieve good teaching practices using learning science can be found in the work found in of the joint report from the National Research Council (NRC) Commission in the United States. The commission came up with a How People Learn (HPL) Framework based on neuroscience research. They reported three significant findings:

1. Students come to classrooms with preconceptions of how the world works. If the student’s initial understanding is not engaged, the student may fail to grasp new concepts that are taught or just learn for the purpose of a test and discard the learning after the test;
2. To develop competence in an area of inquiry a student must have a deep foundation of factual knowledge, understand facts and ideas in the context of a conceptual framework, and organize knowledge in ways that enable retrieval and application; and
3. A metacognitive approach can help students learn to “take control” of their learning by defining goals and monitoring progress³.

So what actions should teachers take to profit from this learning research? Three useful approaches can be summarized as:

1. Teachers must “draw out and work with “students’ preexisting understandings”;
2. Teachers must teach a subject matter in depth “providing a firm foundation of factual knowledge using many examples” and;
3. Teachers must teach metacognitive skills as part of the curriculum.⁴

In sum, it behooves the passionate teacher to ask continually how is it that the water of the brain can be turned into the wine of consciousness?

Footnotes:

1. Eric Jensen Source: Educational Horizons, Vol. 90, No. 2 (December 2011/January 2012), pp. 5-6 Published by: Phi Delta Kappa International
2. Ibid
3. Steven L. Turner Source: American Secondary Education, Vol. 37, No. 1 (Fall 2008), pp. 4-16^[WU6]
4. Ibid