

Well, I'm No Einstein But...

Are you a right brain or left brain thinker? Let me ask you a couple of questions. When speaking, do you use many hand gestures? Or when reading a magazine do you simply jump into whatever article grabs your fancy rather than starting from the beginning and reading to the end? Are you typically running late for your appointments? At work do you juggle ten tasks at once, rather than taking them one at a time? Well, you might be a right brain thinker (Jeff Foxworthy pun).

The reality is of course, we use both the right and left hemisphere functionality of our brain. However it is true that all of us do process information differently from one another. Some of us lean left, using more verbal processing methods. The brain's left hemisphere takes on tasks in sequence or processes linearly. It prefers a more formal study design, responds well to logic and likes to plan ahead. Others are more visual, enjoy conceptualizing, respond to emotion, and have a tendency to be impulsive. These folks would definitely fit into the right brain camp. Most of us use a combination of what I am referencing as right brain and left brain functions.

It should then make good sense to both trainers and teachers that learning can be enhanced for everyone, if we use both right brain and left brain teaching techniques. I recommend a book by Linda Verlee Williams entitled *Teaching for the Two – Sided Mind*. Williams informs us that a right brain/left brain combination punch is really a win/win for us all. Right brain learners will finally experience teaching techniques that better fit the way they process information. Left brain learners can explore new methods of learning and expand how they learn.

For several reasons however, right brain teaching techniques which include a vast array of interesting approaches (visuals, demonstrations, metaphor and analogy, multi-sensory learning, field trips, problem solving, role-play, music and many more) are not frequently used in the classroom. They are typically more learner-centered, and initially require more work and creativity on the part of the teacher or trainer to deliver. However, the improvement in learner retention would certainly be well worth the effort...

I offer this one outstanding example. It is well known that Albert Einstein, the man who literally rewrote the laws of physics and gave to us his Special Theory of Relativity, was verbally challenged in his childhood. Being deficient in his ability to process verbally, Einstein adapted, developing a more visual and right brain approach. In 1905, Einstein, as a young man, wrestles with the incompatibility of two universally accepted theories (Newton's Theory of Light Waves and Maxwell's theory of electromagnetism). Riding in a streetcar in Bern, Switzerland (He was employed in the Patent Office) he gazes back at the famous clock tower that dominated this city. He imagined what would happen if his streetcar raced away from the clock tower at the speed of light. He realized that the clock would appear stopped, since light could not catch up to the streetcar but his own watch within the streetcar itself would continue to tick off seconds. Weeks later he develops his famous equation, Energy equals Mass times the Speed of Light squared... He visualized a solution to the problem and effectively rewrote our understanding of the Universe. Einstein later writes to describe his amazing and very visual thought process.

Paraphrased "The words or the language as they are written or spoken, do not seem to play any role in my mechanism of thought. The physical entities which seem to serve as elements in thought are certain signs or more or less clear images which can be voluntarily reproduced and combined. These elements are of the visual type. Conventional words have to be sought for

laboriously, when the above mentioned (images) are sufficiently established and can be reproduced at will.”

Einstein’s amazing ability alone seems to suggest good reason to explore right brain teaching techniques. I’ve listed and explained a few of these techniques below for your consideration.

Right Brain Teaching Technique

Left-brain dominant people have the advantage in today’s classroom. Over the years we have adapted very left-brain teaching techniques. There are several reasons why this has occurred. In New England the Puritans were first to establish a standardized educational approach in the United States. Their “spare the rod, and spoil the child” ethic demanded strict adherence to learning protocols of the day, which emphasized logic, lecture and rote memorization.

Additionally for many years, males have dominated our educational institutions. As a function, learning in this system has become more hierarchical and competitive rather than collaborative and social. Perhaps the most influential occurrence is when (1450), Gutenberg invents the printing press. Books quickly become our primary learning source. Books of course are wonderful, however they do dispense learning in a very linear, verbal and left brain style. We have evolved into a very left-brain educational system.

Right-brain learners crave teaching methods that play to their creative thinking patterns.

Visualization, lab experimentation, hands-on workshops, role-playing, and demonstrations work best for them. Here are some suggested right brain techniques for trainers and teachers who might want to mix it up a bit: Visualization: Beef up your learning materials by adding visuals; pictures, graphs, charts, diagrams, flow charts, mind maps. Have you heard of a technique called guided imagery? Put on some soft music and take your students on an imaginary journey into your subject matter. For example, the biology teacher that has his class becoming images of light which transform and travel through the receptors in the back of our retina, through the optical nerve and into our brain. Perhaps, the history teacher, who takes us on an imaginary journey through a field hospital during the civil war.

Incorporate and challenge participants to develop metaphors and analogies. Metaphors forge connections between two seemingly unrelated things. A car’s fuel pump and the human heart, the kaleidoscopic nature of the right brain and the digital computer that is representative of the left brain. This is exactly how our brains process. We take what we already know and hook together, or assimilate it with the newly introduced knowledge. What results is a growth in our overall knowledge base. We rearrange our neural networks and establish new synaptic connections. Hey, actually a metaphor is a metaphor for how we learn! Introduce learning using auditory, tactile, and kinesthetic teaching techniques. Sometimes we just need to do a thing to understand it. Imagine twelve sticks all of equal size. Arrange them to form three squares. Do you see them? Now, can you use the sides of the squares (the sticks) to create eight squares? It is difficult to do in your mind, but if given (handed) the sticks, the task becomes much easier. I recently did this in a classroom setting. I posed the problem, and then tried to hand out sets of twelve sticks (a helpful prop). The first three people refused them. Why? Kids need help to learn with sticks and colorful learning aids. We’re adults, and we are suppose to use logic, our minds or so says our left-brain educational system. The guy who finally took the sticks, solved the puzzle.

One final idea from the right! Collaborate, be social, and learn in groups. H. M Levine of Stanford University experimented with computer learning. He found that when peers worked together, to mentor and support one another, they were able to learn (4) times more effectively

than individual computer-based instruction. The collaborative were even more effective than reducing class size or lengthening the time dedicated to instruction.

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