Whole Brain Instruction
Whole Brain Learning

Whole brain learners use their brain, body and mind (heart) to learn. This is also called brain compatible or "brain congruent" learning.

In brain research terms, it is the connection of neurons. If neurons are used, they become integrated into brain circuitry.

Before the age of 10, the window of opportunity is widely opened for us to fully engage in the plasticity of the young brains. Approximately 99% of all information entering through the senses is dropped immediately. When it comes to paying attention, the brain is like a sieve than a sponge.

According to Allyn and Bacon, 1978,

Our children retain:
10% of what they read
20% of what they hear
30% of what they see
50% of what they see and hear
70% of what they say
90% of what they say and do

Several conditions are necessary for whole brain learning to occur.

Learning environment

Effective learning happens in a non-threatening environment. Learners need to feel safe physically and psychologically. A positive surrounding attunes to a child's emotional need. Educators use the word "hook" to capture or connect to our learners emotionally. Learners need to see the meaning of what they are learning to be emotionally "hooked". The focus of information should reflect real life experience. And it should include problem-solving skills, creativity and critical thinking.

Mind-body kinesthetic learning

Kinesthetic or multisensory learning is whole brain learning. Our brain loves stories. Children are more attentive if information is taught in story frames. There should always be role playing or made belief.

Our brain loves patterns and rhythm. Songs, music and movement are right brain activities that allow the integration of left and right brain.

Our brain loves pictures. A picture is worth a thousand words. Visual or visual imagery are great right brain activities. Graphic representation is a tremendous tool for efficient learning. (This will be addressed separately.) Our brain loves movement, novelty, meaning and emotional involvement to achieve real learning. Children need concrete experience with touch, smell, sight, sound and HEART to consolidate their learning into long term memory.

Elaborate rehearsal

To transfer information from short-term memory to long-term memory, children need to rehearse what they learned. The key to memory is repetition. According to research, it takes 30 repetitions to remember any given new information. (Mega-drilling, Cooke) Many techniques and strategies have been developed by educators to help children.

Mnemonics is the study and development of the system for improving and assisting the memory. It is a device such as a pattern of letters, ideas, or association. The most favorite example is the colors of the rainbow. We made up a name.

R O Y G B I V

↓ ↓ ↓ ↓ ↓ ↓ ↓

red orange yellow green blue indigo violet

Tutors and learners can make up their own mnemonics.

Chunking involves breaking down a difficult text into more manageable pieces. Students rewrite these "chunks".

ie, a telephone number 4365678
is chunked into 436-5678

Chunking helps students to identify key words, main ideas, and details. Students learn to paraphrase, organize and synthesize information.

Writing is the sample art of using paper and pencil (pen) to write down information. Writing causes the brain to process and move information acquired in depth. There is a strong link between writing and thinking. Writing servers as a tool for refining thinking. At the same time, complex, cognitive activity produces more articulate and expressive writing. It is very important to develop good writing habits / skills at an early age. Writing habits will eventually lead to good note taking. This skill is needed in middle, high school, and even college.

Young children usually have trouble with the fine-motor skill of holding a pencil.

- try pencil grip, 3 sided pencils or big size pencils

- use Grip Tape in sport goods or any tape to wrap around a regular pencil

Research suggests that children's brains are more active when they are writing than typing on a keyboard.

TWTeaching strongly suggests that learners should complete all worksheets with paper and pencil and then check the answer, correct and redo the work with our video.

Children should be actors of what they learned, not reactors to what we taught.

Most of the information on Whole Brain learning / Instruction are taken from conferences organized by the Los Angeles office of Education in Learning and Thinking Skills Institute. (May 1998, May, 2001)

Speakers: Dr. Robert Svylwester, Professor of Education: University of Oregon. Patricia Woffe, PhD. : Brain-Compatible Classroom Strategies. Classroom Connections: The Brain and Student Behavior.