About Whole-Brain, Kinesthetic Learning

Whole-brain learning uses techniques that integrate the imaginative brain skills with the analytical and language skills. Kinesthetic learning deals with body and movement, learning and knowing through physical activity and motion. Simple strategies can make better use of the whole brain and can dramatically improve learning and performance skills.

"Rohwer (1966) investigated various kinds of associative mnemonics in young children and found that the best connective for remembering words were meaningful "actor-action-object" relationships." (Ehri, Deffner, & Wilce, 1984, p. 881) Further research (Fleming & Stern, 1986) supports, "The tactile-receptive systems of the hands provide for another access to the hemispheres ... The consistent results of the various investigations may warrant recommendation that the right hemisphere ... should be directly stimulated in order to improve (student's) accuracy and efficiency in reading and spelling" (p. 358).

“Because there is nothing inherent in the visual symbol of a letter that suggests its name or sound, one must develop that "something" that causes the child to make the letter/sound connections.” (Ehri, Deffner, & Wilce, 1984) If pictures are used that relate to the sounds of the letters and the child's modalities are used to learn and remember the sounds, these techniques will provide a safety net for memory and retrieval. Without connections there will be no understanding. Without understanding, there is no retention, usage or transference.

Here is an example of Zoo-phonics’ right hemispheric, brain-efficient sequential teaching using pictorial mnemonics:

a)

(Bradshaw, Clark, & Wrighton, 1985)

b)

(Bradshaw, Clark, & Wrighton, 1985)

c) b d

These examples represent the transition from picture (a mnemonic), to picture-letter (still

maintaining its mnemonic, concrete quality), transitioning to the abstract letter, which, in good time, is our end result. To re-state,

a) this presentation of the alphabet begins with a right hemispheric presentation through the picture, b) keeps its right hemisphere presentation as it makes its transition to the abstract, (seen by the picture placed on top of the letter), c) then fully and successfully moves to a left hemispheric task, which is the letter.

Which is easier to remember for a five year old:

The visual impact of the bear, which easily demonstrates the "buh" sound, cements the sound to the letter. Presenting letters in their abstract forms to young children delays memory, understanding and usage. Presenting the alphabet in a brain-efficient manner produces utilization because there is understanding.

"Many other studies confirm that paired-associate learning in children is much improved when learners create or are provided with concrete, meaningful, interactive and imaginable connectives that link the stimulus and response terms in memory." (Ehri, Deffner, Wilce, 1984, p. 881) But, this is not all. The following paragraph will demonstrate the most important component to memory success.

Attach a motor movement, (also a mnemonic, right brain stimulus), which is directly related to the picture/letter, establishing the sounds to the letters. The brain uses this device to cement the information into memory, then uses the same device to retrieve the information from the brain when needed for reading and spelling activities.

It's commonly believed that when you hear something, you retain 10% of the information. If you see it, hear it and say it, you retain 40% . But, if you hear, see, say and DO it, (participate with the information), you retain 70- 100% of the information. Using a multi-modal approach to teach the reading and writing process, capitalizes on childrens' natural tendency to wiggle. By using pictures in place of abstract symbols, the brain is better able to retain the information within the memory bank. A body signal done simultaneously with the visual aid stimulates the muscles, nervous system and both hemispheres of the brain. The body movement becomes internal and automatic, cueing the brain to utilize the information recorded visually, auditorily and kinesthetically.

Let's go back to the bear: A child looks at the picture of the bear and associatively "sees" the shape, which is in the shape of the letter, (unbeknownst to the child as yet). The child is then taught a body gesture by having him use his hand to reach into the air like the bear "paw" reaching for honey from the hive and bringing it to the mouth. Specifically: the child reaches up with his hand, pulls the hand down to this mouth as if eating honey, and says "buh". At this point all modalities (eyes, ears, mouth and limb) have been involved in the beginning reading and spelling process.

In a short time, after all the body gestures (signals to the brain) and sounds have been mastered, the picture of an animal placed on top of a letter is presented. The child now accepts the idea that the animal is in the shape of a letter, and that every time that child sees that animal/letter, s/he makes the "buh" sound. It will not be long before the child is seeing just the letter in text, and will be able to make the sound as s/he does the body movement or signal. Learning the initial alphabet sounds in this fashion will take a matter of days or a few weeks.