



Movement-Based Learning For Life

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In the thirty-five years since we made the choice to dedicate our work to teaching through movement, we've created the Educational Kinesiology (Edu-K) profession, based on a system of knowledge that recognizes physical skills as integral to the learning process. We've worked with thousands of learners of all ages and abilities, established a language of movement, and developed the self-help Brain Gym[®], Vision Gym[®], Double Doodle Play, and Movement Dynamics programs, as well as a facilitated In-Depth process. We've coauthored more than fifteen books and manuals that have been translated into forty-some languages, and founded Brain Gym[®] International, with affiliates in more than twenty countries on six continents. We are realizing our dream of seeing movement-based learning unfold as a worldwide reality.

What is movement-based learning? Learning is the acquisition of knowledge or skills through experience, practice, or study. Ease of learning further depends on the ability to successfully transfer new learning in one subject area (such as spelling) to another area of interest (such as reading), and even to completely new territory (perhaps story writing). In Edu-K, we use simple physical activities as the primary context for acquiring new experience, as well as the vehicle for transferring new learning. For example, we might use the Thinking Cap from the Brain Gym[®] activities to teach the auditory skill of making spelling distinctions. We might then use the activity again to transfer that skill to listening to language when reading, and then again to listening to one's own thoughts while writing creatively. In other words, movement-based learning uses physical function as a way to bring learners to the present, to experience their senses as they engage, and to create a future for themselves beyond what is yet known.

The educational theorist Jean Piaget described the learner's cognitive structure as beginning with concrete operations, then moving to image-making, and finally to abstractions. For the learner, development of an internal map of the body is the essential key to ease of function. This internal map includes a sense of the proprioception of muscles, an awareness of the relationship of joints to bone, an internal awareness of direction and balance, and an ability to stand aside and notice or observe these functions through kinespheric awareness. The learner is asking, in a pre-cognitive way:

- *Where am I in space?*
- *Where is one thing in relation to another?*
- *What are these different elements of the world around me?*
- *And who am I in the world?*

The answer to these questions is given through movement.

In *A User's Guide to the Brain*, clinical professor of psychiatry at Harvard Medical School John Ratey, M.D., informs his readers that "... the brain's motor function affects so much more than just physical motion. It is crucial to all other brain functions—perception, attention, emotion—and so affects the

highest cognitive processes of memory, thinking, and learning.”

Researchers such as Ratey also equate intelligence with the ability to read new situations, interpret feedback, and modify behavior in response to a fast-changing environment.

The effectiveness of the movement educator, both in the classroom and in private work, is to join with students where they are and support them in connecting with an inspiring or motivating context. When working with students—whether one-to-one or in a group—Brain Gym® Instructor/Consultants perceive learning as the opportunity for creativity, held in the immediacy and spontaneity of a current interaction. The learner’s curiosity about something new has been sparked and he enters a zone of uncertainty that seeks to be resolved as new learning; the teacher always looking for ways to best support that learning. Skilled teachers perceive the brain as dynamic and growing (not fixed or static), and don’t think in terms of limits and labels. Instead, the teacher stokes the fire of curiosity and adventure, involving the learner in creating a teachable moment.

A teacher of movement-based learning asks herself questions like the following:

- *What is the learner excited about?*
- *What will invite the learner to move or make contact?*
- *What will engage the learner in a spirit of interest, curiosity, and even play that is mindful and intentional?*

By noticing his own actions, the learner begins to initiate his own learning and to develop feedback, feed-forward, and self-control. Such experiences result in learning *how* to learn.

Many people understand education as the taking in of information, yet one essential task of the learning process is to create a balance between declarative and procedural knowledge. We access declarative knowledge by use of words . . . by thinking and conversing. Yet it’s the procedural knowledge that gives us the physical maps to carry out our thoughts and purposes. So while motivation provides the zeal to declare a goal or intention, movement gives us a map for applying the intention and following through.

Purposeful movements like the Brain Gym® activities improve balance and coordination. For years, a growing body of research has related vestibular balance to school-readiness. Most recently (in 2005), researchers Stoodley, Fawcett, Nicolson, and Stein found an impaired balancing ability in dyslexic children. The One Leg Stand (Schrager, 2001) has been incorporated into a more extensive test battery to identify children who have, or are at risk of having, ADHD, dyslexia, and other specific learning disabilities. Balance beams and balance boards are being widely used by special education teachers to develop balance abilities, for the ability to keep one’s balance is known to be highly correlated with brain integration and reading-readiness. Kinesiologist and biomechanist Katy Bowman emphasizes that, to the extent that balance is lacking, the brain, visual system, and vestibular system have to work harder to compensate. In Edu-K we find that the integrity of the moving physical structure provides a context for the cognitive function necessary for focal attention and new learning.

Moving activates the brain. Dr. John Medina, director of the Brain Center for Applied Learning Research at Seattle Pacific University, says in his book *Brain Rules: 12 Principles for Surviving and Thriving at Work, Home, and School*, “Exercise boosts brain power. Humans adapted during evolution

by constantly moving (both to get food and to avoid predators).” Medina further asserts that people think better in motion.

Movement educators understand learning as a process of using activity, focus, play, and practice to make things ever more real, certain, familiar, and functional. They guide children in moving through a learning cycle that begins with an experience of openness to novelty (a goal). The next step is, through imagination, to perform a new function with the intention to master it. The teacher assists the learner in making a match between his goal and a previously learned skill (or familiar context) from which to move. The cycle is completed as the new skill is coded through words and language until it becomes familiar and easy to recall. Finally, celebration of the learning provides a successful context for ever further growth. At any given moment, the teacher can lead the learner to a happy medium between exploring on his own and connecting with the group; both essential elements to the learning process.

What holds meaning and interest for learners is what will claim their attention. The learner’s entire experience consists of the places to which he directs his attention and the resultant neuropathways created in order for him to physically, mentally, and emotionally convey himself to those places. Ideally, the focuses he selects—as a self-initiating learner—will enhance his world and influence him to feel at ease and connected with others. True education is not about deficit management. Any learning challenge is recognized as the effect of effort still in motion toward a skill that has yet to be fully learned.

About Paul and Gail Dennison:

In 1975, after eight years in Los Angeles as a public school teacher of grades K-6 including six years as a reading specialist, Paul Dennison came to a fork in the path of his educational career. He could now accept a position as a school principal, or he could pursue a calling that seemed even more exciting and fulfilling: that of sharing the academic breakthroughs made possible by the use of purposeful movement.

An exciting part of his journey occurred when he completed the Touch For Health course in 1979. In 1981 he met his future wife and partner, Gail Hargrove, at the Touch For Health Conference. Paul and Gail are the authors of Brain Gym®: Teacher’s Edition; they lecture and teach internationally. This year they launched their Hearts at Play website, bringing the message of movement-based learning to parents and educators worldwide.

For more information see heartsatplay.com or braingym.com.