Smart Moves

By Carla Hannaford
Great River Books, 2005

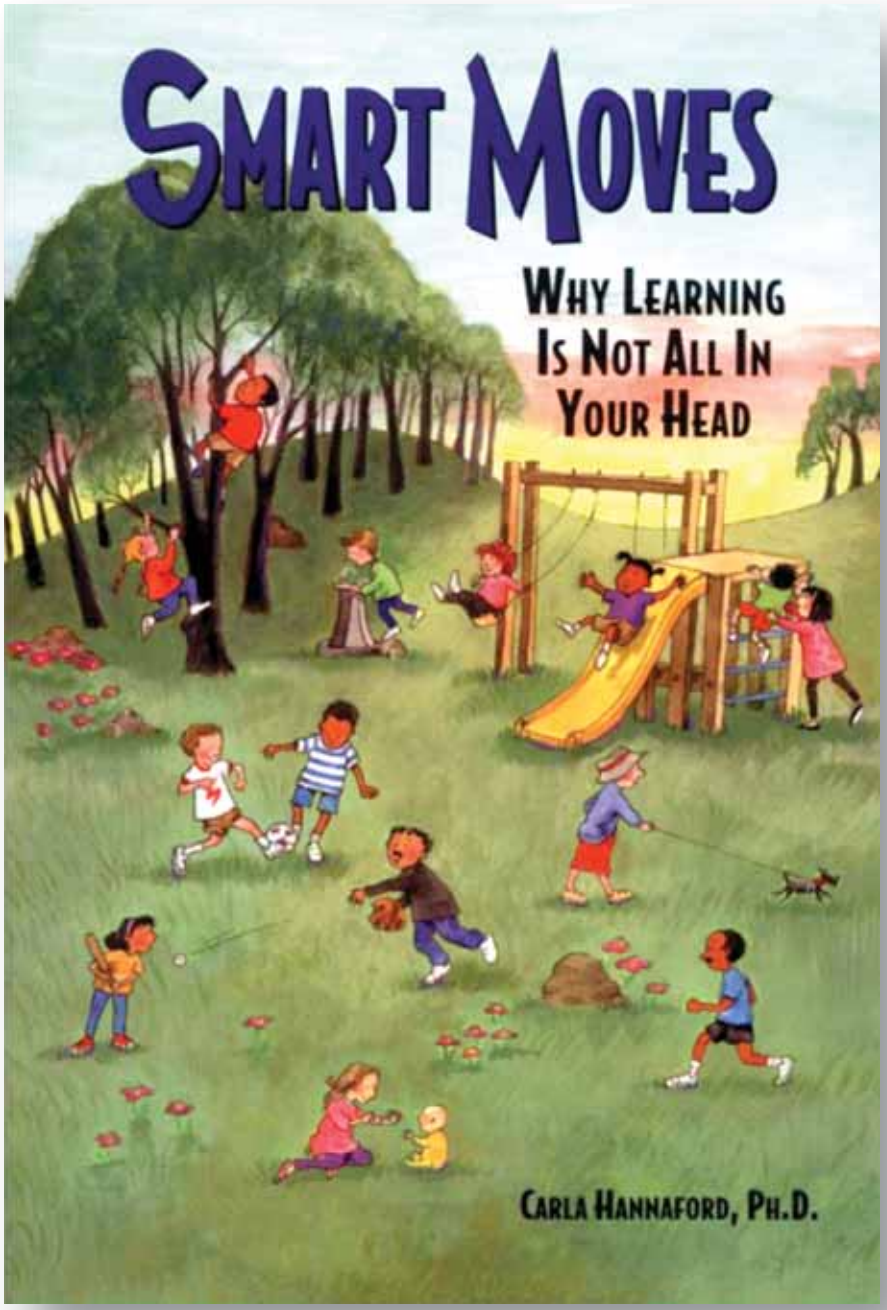
Reviewed by David Thaxton

"The foot bone's connected to the ankle bone; the ankle bone's connected to the shin bone," is an expression that most of us have heard before. At some point, we have all experienced diagrams and surveys of the brain, whether in an educational psychology or child development course, or in our own research. We may know the names of the structures of the brain, some of their functions and perhaps a little about how they work, but how does it all connect to the body? How does the body itself influence the development of the brain? What is happening when it is functioning poorly, and are there things that we do instructionally that encourage or hamper brain development? In her latest edition of *Smart Moves: Why Learning Is Not All In Your Head*, Carla Hannaford draws from her diverse experiences as an educator, counselor, biologist, and brain researcher to answer these questions and offer prescriptions for mind and body health and development.

Learning Is Not All in Your Head

In the opening chapters, Hannaford not only outlines brain and body physiology but also the intimate connection between sensory-motor experiences of the body and the building of neural networks. She reveals that our understanding of the world as well as the perception of ourselves within it is not the product of our senses inputting information in isolation, but rather the result of them working closely in concert with each other. Take for example, our sense of sight:

> Vision is a very complex phenomenon, with only a small percentage (less than 5 percent) of the process occurring in the eyes. The other 95 percent of vision takes place in the brain from association with touch, hearing and proprioception. Listen closely to a child who is seeing something new. The child immediately reaches out to touch the object while saying, "Let me see that!"[1]



Hannaford's prescriptions for movement are not simply reaffirming for teachers who use movement, but they also provide a powerful advocacy tool as her results are backed up by hard scientific research. Even simple activities of running, jumping, skipping, and twirling have great impact upon developing the brain's ability to learn. She encourages the exploration of movement-based activities that stretch into the regular classroom and beyond school altogether such as yoga and tai chi.

She makes a strong case that a sensory rich environment providing opportunities for full-bodied experiences is the most effective element in a child's cognitive development. Yet creativity expert Sir Ken Robinson has posited that much of the focus of formal education is from the waist up, in the head, and mostly on one side.[2] The evidence laid out in *Smart Moves* confirms this and shows how a heavy reliance on lecture/written assessment is not only inefficient but potentially hinders brain function and creativity.

Moves that Improve

Dr. Hannaford continues in the second section of the book to outline movements and activities that foster brain development. It will come as little surprise to Orff practitioners who include creative movement and dance in their classes, that this is beneficial to physical, mental, emotional, and physiological health. Hannaford's prescriptions for movement are not simply reaffirming for teachers who use movement, but they also provide a powerful advocacy tool as her results are backed up by hard scientific research. Even simple activities of running, jumping, skipping, and twirling have great impact upon developing the brain's ability to learn. She encourages the exploration of movement-based activities that stretch into the regular classroom and beyond school altogether such as yoga and tai chi. In addition, she outlines many of the basic premises and exercises developed by Paul and Gail Dennison known as Brain Gym. While the scientific validity of the methodology of Brain Gym has come under question by neuroscientists, Hannaford makes the case for its inclusion as part of a movement rich environment that is as energizing for the mind as it is for the body.

"Stressed Out Survival Oriented Humans"

"Stressed Out Survival Oriented Humans" (SOSOHs) is the term the author coins in describing the variety of students behaving in ways that we now refer to as hyperactive, attention deficit, anti-social, or simply disruptive. While there is much debate as to the necessity and effectiveness of diagnosis and medical intervention for ADD, ADHD, and other disorders, Hannaford advocates taking a compassionate approach that recognizes that these students are operating in "survival mode." For whether the cause may be biological, chemical, or environmental, their brains are simply responding naturally to stress; heaping more fear and anxiety upon them is not going to help. Simply increasing the nutrients the brain needs (oxygen, water and exercise) and decreasing factors detrimental to healthy brain development (sugar, caffeine and television) goes a long way towards bringing SOSOHs back from the edge. If we then take her advice on how to rethink our definitions of "developmentally appropriate" activities and adjust our educational practices accordingly, many of the symptoms of such disorders could be mitigated, perhaps to extinction. Though her recommendations range from revolutionary (not beginning to teach reading until age seven or eight or teaching cursive writing before printing) to simple (giving children more unstructured play time and experiences in music and dance) she provides both the scientific reasoning behind them as well as models from industrialized and developing countries that demonstrate real-world success.

"Domi-Know"

Most educators are familiar with learning styles and of course, the classic "right-brain/left-brain" concept. In her studies, Hannaford has taken this a step further. What is your dominant brain hemisphere? (Left: analytical, Right: gestalt.) Further, what is your dominant eye, ear, hand, and foot? By determining the profile of mind/body dominance, we can tell a lot about what our students' learning strengths and weaknesses are as well as our own. For example, someone with a dominant left hemisphere, left eye, right ear and right hand is going to tend to be logic-dominant, visually limited, with full auditory and communicative access. Therefore, they would tend to learn best in a situation where they are allowed to discuss details with peers, but not need to rely heavily on a chart, board or handout. The case made is not a new one: if we can teach to our students known strengths while mitigating their weaknesses, our effectiveness increases dramatically. However, using Hannoford's "Domi-Know" model provides a powerful tool for understanding the way in which our individual students' bodies and minds are operating.

Smart Moves is a book for every educator and parent. Understanding the way the mind develops in concert with the body is a powerful catalyst for rethinking the way our children are raised and educated.

Endnotes

1 Carla Hannaford, *Smart Moves: Why Learning Is Not All in Your Head*.(Salt Lake: Great River Books, 2005.)

2 Sir Ken Robinson. *Do Schools Kill Creativity?* Online video. (2006), http://www.ted.com/index.php/talks/ken_robinson_says_schools_kill_creativity.html (accessed October 19, 2008).

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