

Reading on the Move Quotes From S'cool Moves Workshop With Debi Wilson

The brain changes as it grows. What determines the brain's course? Some force outside the brain causes it to wire in special and distinct ways. But what? The resounding answer came as neuroscientists watched the brain work: Experience makes the brain shape itself into what it becomes.

Patricia Stacey, *The Boy Who Loved Windows*

The brain changes and builds itself more after birth than before birth. 83% of dendritic growth happens after birth. The key has to do with senses, with stimulation. The amazing and wondrous fact is that the brain is created to create itself after birth – brain development as a *conversation*. Brain development as a *response*.

Patricia Stacey, *The Boy Who Loved Windows*

The body and mind must be mirrored universes - it is as if the mind were the clouds and the body were the lake. When you look into the body, you see a reflection of the mind, the way clouds appear in a clear pool on a sunny afternoon. Change the body. Change the mind.

Patricia Stacey, *The Boy Who Loved Windows*

Stanley Greenspan is a child psychiatrist well known for his work in child development. He had spent 16 years studying the subject at the National Institute of Mental Health, which led to a new philosophy of emotional development, for which he won the Ittleson Award, the American Psychiatric Association's highest honor for research in child psychiatry.

Dr. Greenspan applied recent research about how babies and toddlers "process" the vast amount of sensory information available to them each day. His therapeutic model to help children with a variety of problems is called D.I.R. (developmental, individual-difference, relationship-based model) or, informally, "floor time."

The Child With Special Needs

Children with autism talk and move stiffly, not because they don't have feelings but very likely because they just don't have good motor planning skills. A quote from a book on autism said, "It seems answers came from disparate corners, different camps, and conflicting sciences."

Patricia Stacey, *The Boy Who Loved Windows*

One of the elements of Greenspan's "integrated program" was the notion that skills are wrapped together. With an intellectual gain, invariably a physical one appears as well.

The Child With Special Needs

No learning is really yours until it is in your body.

Dawna Markova, *An Unused Intelligence*

According to Greenspan's developmental approach, the brain depends on the body for its breadth of knowledge. By moving through space, we integrate with the world, and thus be declaring ourselves a creature in it, we come to know it and can call ourselves intelligent beings. Movement stimulates brain function, it creates the nerve impulses that build mental pathways. Stanley Greenspan, M.D., *The Child With Special Needs*

Greenspan says, "If you want to improve one system, go through another." "If you want a child to learn a word, you must use the body to teach it." ...Imaginative play is the first real schoolhouse, the stage on which all abstract thinking plays itself out. Stanley Greenspan, M.D., *The Child With Special Needs*

A major nerve runs directly to the brain from the gum area of the mouth. This nerve is responsible for noise tolerance and organization. Thumb sucking is one way children organize themselves. Massaging this area in the mouth helps children with organization. The body and brain cannot be separated. Patricia Stacey, *The Boy Who Loved Windows*

The research about rats whose brains grew in response to their enriched environment has more information that wasn't shared. The rats brains that were the most highly developed were the ones that were in their "natural" environment, out of cages and running free, doing what rats do naturally. Play creates the foundation for all learning! Dr. Kathy Hirsh-Pasek, et al, *Einstein Never Used Flashcards*

If 10-15% of school age children have ADHD, 20% have vision related learning disorders, 12%-30% sensory integration dysfunction, 20% spectrum related autism, 10-20% dyslexia, and 5% some degree of depression or emotional disorder, statistically, there must be overlap between diagnosis. Debra Em Wilson, variety of sources compiled

Even though it is generally assumed that people diagnosed as having ADHD evidence a common set of characteristics emanating from a common etiology, little agreement is found among researchers regarding these symptoms. Dr. Stanley Greenspan, M.D., *The Child With Special Needs*

Making careless mistakes, not listening to what is being said, difficulty organizing tasks and activities, losing and misplacing belongings, fidgeting and squirming in seat, talking excessively, interrupting or intruding on others are symptoms that are seen in children and adults with ADHD, vision problems, dyslexia, sensory integration dysfunction, undiagnosed allergies AND normal children. Patricia Lemur, *Are You Sure It's ADD?*

Many children must depend upon body tension to maintain balance. Children with inadequately developed balance find it difficult to sit or stand quietly. They often have short attention spans and are most comfortable when in motion. Anne Davies, M.A.

There is something in nature that forms patterns. We, as part of nature, also form patterns. The mind is like the wind and body like the sand; if you want to know how the wind is blowing, you can look at the sand. Quote from Bonnie Bainbridge Cohen

The cerebellum is the part of the brain that processes learning through movement. To date, according to Dr. Carla Hannaford, about 100 studies suggest strong links between the cerebellum and memory, spatial perception, language, attention, emotion, nonverbal cues and even decision-making. These findings implicate the value of movement, play, games, physical education, and the arts (which all use coordinated movements) in boosting cognition. From Tim Burns, *Anatomy of Possibility*

I tried to teach my child with books.
He gave me puzzled looks.
I tried to teach my child with words.
They passed him by often unheard.
Despairingly, I turned aside,
"How shall I teach this child," I cried
Into my hand he put the key,
"Come," he said, "and play with me."
Anonymous

A study by Dr. Kathy Hirsh-Pasek of children whose parents sent their children to "academic" preschools versus traditional preschools that emphasized play and discovery found that children in academic preschools had no short-term, let alone long-term, academic advantages. By the time the children were in first grade, the research couldn't distinguish between the two groups. There was one difference however: children who had been in the academic environment were more anxious and less creative than the children in the other group.

Dr. Kathy Hirsh-Pasek, et al, *Einstein Never Used Flashcards*

If you want your children to be brilliant, tell them fairy tales. If you want them to be very brilliant, tell them even more fairy tales. Imagination is more important than knowledge. When I examine myself and my methods of thought, I come to the conclusion that the gift of imagination has meant more to me than my talent for abstract thinking. Albert Einstein

Nerve networks grow out of our unique sensory experiences laying down intricate patterns that govern all our higher level brain development...The richer our sensory environment and the greater our freedom to explore it, the more intricate will be the patterns for learning, thought, and creativity.

Carla Hannaford, Ph.D. from Tim Burns, *The Anatomy of Possibility*

Mounting evidence shows that movement is crucial to every other brain function, including memory, emotion, language, and learning...Our "higher" brain functions have evolved from movement and still depend on it. John J. Ratey, M.D., from Tim Burns, *The Anatomy of Possibility*

In the early formative years, play is almost synonymous with life. It is second only to being nourished, protected, and loved. It is a basic ingredient of physical, intellectual, social, and emotional growth.

Ashley Montague, Anthropologist and Author
from Tim Burns, *The Anatomy of Possibility*

Play is a joyful activity that has no clear-cut goal, that is free from anxiety, and done for its own sake. There is a tremendous hunger in our culture for true play.

Stuart L. Brown, M.D., President, Institute for Play
from Tim Burns, *The Anatomy of Possibility*

Dyslexia is being studied scientifically by the National Institute of Health. So far, we know that there are several genes responsible for reading challenges associated with dyslexia. If one parent has dyslexia, the odds are 50% that their children will inherit it.

People with dyslexia have a right hemisphere that is 10% larger than the left. In most people, the right hemisphere is the artistic, global, whole thinking portion of the brain. The left hemisphere is the logical, linear, language portion of the brain. For children to be good readers, they must use both hemispheres of their brain in an integrated way so that they can decode words and comprehend what is read.

There is not one specific area in the brain reserved for reading. The skills essential for reading are housed in every area of the brain. Dr. Phil Delfina, National Institute of Mental Health

75% of children will learn to read despite the method taught. 20% of children will need specific reading intervention. 5% of children may never become functionally literate. Dr. Phil Delfina, National Institute of Mental Health

10-20 percent of the population has some form of dyslexia. 50% of left hand children are dyslexic. What is the percentage of left handed people in our society? Of that small percentage, 50% are dyslexic. This is an intriguing statistic.

The more closely we consider the elaborate interplay of brain and body, the more clearly one compelling theme emerges: Movement is essential to learning. Movement awakens and activates many of our mental capacities.

Carla Hannaford, Ph.D.

Movement integrates and anchors new information and experience into our neural networks. Movement is vital to all the actions by which we embody and express our learning, our understanding and ourselves.

Carla Hannaford, Ph.D.

No one part of the central nervous system works alone. Messages must go back and forth from one part to another, so that touch can aid vision, vision can aid balance, balance can aid body awareness, body awareness can aid movement, movement can aid learning, and so forth.

Carol Stock Kranowitz, M.A., *The Out-of-Sync Child*

Of course we know that our brains are encased in our skulls and are in ceaseless communication with the rest of our bodies. But in practice, when we think about thinking, when we try to encourage it, to mold conditions favorable to learning and creative thought, we tend to regard it as a kind of disembodied process, as if the body's role in that process were to carry the brain from place to place so it can do the important work of thinking. Carla Hannaford, Ph.D., *Smart Moves*

All the best educational programs around the world combine elements that stimulate both a child's physical and mental development – for in truth there is no split between the two. Gordon Dryden, *The Learning Revolution*

The most important thing is to realize that the brain is growing and changing all the time. It feeds on stimulation, and it is never too late to feed it. Bruce McEwen, Neurophysiologist
from Tim Burns, *The Anatomy of Possibility*

We always have the ability to remodel our brains. To change the wiring in one skill you must engage in some activity that is unfamiliar, novel to you but related to that skill, because simply repeating the same activity only maintains already established connections. John J. Ratey, M.D.
from Tim Burns, *The Anatomy of Possibility*

A recent study in England of children labeled “Gate”, “Developmental Dyslexia”, and “Normal”, found that the children with developmental dyslexia had a significantly more difficult time detecting tones in sounds and rhythmic patterns in speech.
Webmed, Inc.

A recent study with boys labeled ADHD found that after participating in activities that improved motor planning, rhythm, and timing, their test scores in academic areas improved significantly.
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