Does Our Educational System Contribute to Attentional and Learning Difficulties in Our Children?

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I have great concerns about teaching preschool and kindergarten children to read and write. Developmentally and neurologically it doesn't make sense. There is a developmental progression of sensory-motor skills that a young child needs to master in the first seven years of life. Despite what we think, learning is not "all from our head." The movements of our body in utero, through infancy and childhood, and even in adulthood form the neural pathways in our mind that we later use to read, write, spell, do math, and think in an imaginative and creative way. I see countless numbers of children in my practice who have been diagnosed with "ADD" or "learning disabilities" who miraculously improve when they are taken out of an "academic" kindergarten or given an extra year in a developmental kindergarten that emphasizes movement and the integration of their sensory-motor systems.

My years of experience as a developmental and behavioral pediatrician have shown me that children who have difficulties reading and writing usually have a poorly developed sense of balance, have difficulty making eye contact, have difficulty tracking or following with their eyes, can't easily distinguish the right side of the body from the left, have difficulty sitting still in a chair, and have difficulty locating their bodies in space. Many of these children who have difficulties reading and writing also have poor muscle tone, exemplified by a slumped posture, a tense or fisted pencil grip, and "flat feet" (collapsed arches). Sometimes these children are overly sensitive to touch and have difficulties in their peer relationships because they are using their minds and eyes to help their bodies navigate in space and thus they miss social, non-verbal cues from their playmates. These children also have an overactive sympathetic nervous system ("fight or flight" reaction) and are therefore extra-sensitive to the stimulant effects of sugar, chocolate, lack of sleep, changes in routines, television, and playing video and computer games.

Children who are ready to read and write should be able to accomplish these tasks:

- To pay attention and sit still in a chair for at least 20 minutes, without needing to wiggle or sit on their feet or wrap their feet around the legs of the chair as a way to locate their bodies in space by muscle movement or activation of pressure receptors.
- To balance on one foot, without their knees touching, and in stillness, with both arms extended out to their sides while they count backward without losing their balance.
- To stand on one foot, with arms stretched out in front of them, palms facing up, with both eyes closed for 10 seconds without falling.
- To reproduce patterns of abstract lines and curves (e.g., various geometric shapes, numbers, or letters) on a piece of paper with a pencil when someone else draws these shapes, numbers or letters on their backs.
- To walk slowly on a balance beam, skip, and jump rope.

If children can't do these tasks easily then they haven't integrated their vestibular and proprioceptive (sensory-motor) systems, and they will have difficulty sitting still, listening, focusing their eyes, focusing their attention, and remembering numbers and letters in the classroom. Children integrate their sensory-motor system through body movements and not through flash cards or playing electronic games. Physical movements such as skipping, hopping, rolling down hills, playing catch with a ball, jumping rope, running, walking, clapping games and circle games, as well as doing lots of fine motor activities with their fingers—cutting with scissors, digging in the garden, kneading bread dough, pulling weeds, painting, beading, drawing, sewing, finger knitting—build and strengthen neural pathways. In contrast, watching television or videos and playing comput-

er games are extremely poor sources of stimulation for their sensory-motor development and actually prevent the integration of their nervous systems by keeping children in a state of stress, and activating their sympathetic nervous systems, their "fight or flight" response.

Finally, the ability to print and match a particular sound to a specific letter (phonics) in children is predominately a left-sided (analytic) brain activity. Developmentally, the left side of the brain doesn't fully start to develop or myelinate until ages 7 to 9 years (this is especially true for boys). When we teach children to read or write at an earlier age, we stress their minds and their bodies and force them to use only the right side of their brains for reading (sight memory). The right brain is more intuitive and looks at the whole picture rather than at details, so the child usually looks only at the first and last letter and the length of a word and then makes a guess at what the word might be, without sounding it out. Some children can easily switch from the right hemisphere to the left as they get older, but many children (especially the ones who can't skip) haven't developed the pathway (corpus callosum) to quickly travel from the right side of the brain to the left side; these are then stuck trying to read and spell with the right hemisphere. These children often write letters backward, can't spell, and can't seem to remember which sounds go with which letters. The effort required to write is also tremendous.

Our American diet, which is high in simple sugars, high in partially hydrogenated ("bad") fats, and low in omega 3 fatty acids, contributes to our current epidemic in attentional and learning problems, and I wonder if much of our current epidemic also comes from our children watching too much television, playing too many video games, spending too much time in front of a computer screen, and being pushed to read and write too early.

We need to surround young children with what I call the "Buddha" state. This is regulated by the parasympathetic nervous system, which is best supported by adequate sleep, predictable rhythms and routines, wholesome nutrition, warmth, harmonious non-competitive rhythmic movements, and most importantly, our love. Children's brains develop and integrate when they are in the "Buddha" state. Their brains can't fully integrate or develop when they are in a state of stress or in survival mode, i.e. "fight or flight."

I support, therefore, preschools and kindergartens that emphasize healthy movements, promote daily living skills (e.g., sweeping and stirring), as well as encourage creative "pretend" play. If preschools and kindergartens, and the government laws that set the standards for education, can support these healthy activities and stop trying to teach our young children to read and write, then I believe we will start to see healthier 8 and 9 year olds who can listen, focus, sit still, write, read, pay attention, and learn with ease.

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