# How STICK with CHARACTER™ Strengthens Brain Integration Thereby Improving One's Ability to Learn and Close Tasks Successfully

## An Interview with Dr. James Fadigan

Ph.D., Brain Research expert, and
President of Learn to Learn, Inc.
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Dr. James Fadigan, Ph.D., and president of Learn to Learn, Inc., recently sat down with Moving with Character™ to explain the scientific reasons for the learning improvements we see with students who participate in our Moving with Character™ programs. Dr. Fadigan has spent 27 years dedicated to stroke research and, for the last 14 years, has been researching and developing the models by which human beings improve their ability to learn concepts and skills. As a noted expert in the area of brain research and brain integration, we asked Dr. Fadigan to help us explain how and why the Moving with Character™ *Stick with Character*™ program works to help children stay focused and succeed at the tasks and challenges put before them.

*Some Background Information on How the Brain Learns*

According to Dr. Fadigan, "If you stimulate and challenge the brain, even under severe conditions, it will adapt. The brain wants to perform its tasks as best it can. In order to get the brain fully integrated, we need the proper stimulation and challenge." In order for one to learn, one must have their cognitive skills (concentration, perception, memory, logical thinking, etc.) in order. The word cognition is defined as "the act of knowing" or "knowledge". Physical challenges to the brain, like those experienced in *Stick with Character*™, help to build cognitive skills. According to Dr. Fadigan, "With the proper physical challenges, we will see our children's brain progress significantly and get better day by day. Within three to six months, you can see gross improvement in overall learning."

One of the critical factors necessary for learning is known as "near point vision" which means the point at which the eyes converge when looking at something. Most children develop near point vision as they learn to crawl; as they crawl, their eyes converge in front of them as they look at the floor thus using both hemispheres of the brain simultaneously. Without near point vision, a child cannot read. In order to develop near point vision, one must develop the brain hemispheres by "crossing the midline" which is a phrase Dr. Fadigan uses to explain how we strengthen our brain integration by forcing the right and left brain hemispheres to work together. In crawling, children cross the midline every time they move their arms and legs in opposition. Crossing the midline helps develop both the right and left hemispheres of the brain (brain integration) which will be crucial for near point vision/convergence and other learning abilities.

Dr. Fadigan tells us "it has been estimated that 20% of the children in our schools have serious problems with convergence. In more than 70% of those children, the problem is related to their early lack of crossing the midline. *Stick with Character*™ is doing that in a systematic, fun way that kids love and that generates results in a reasonable period of time."

*The Problems Today*

"The kids who are really suffering are the ones who don't have these brain integration skills and don't know why they are struggling in school and whose parents don't know why the students are struggling and whose teachers don't know why they are struggling; and, schools are taking away physical education, recess, activities, and play time. The problems

in Education are, in part, associated with this lack of physical activity," says Dr. Fadigan. We have to make sure that school children are ready to learn; that their brains are ready to learn. The best teachers with the best curriculum will not work if a child's brain is not ready to learn.

*Brain Integration*

Brain integration refers to the process of the brain's many systems accepting input or information. Dr. Fadigan uses the following example to illustrate brain integration, "When I read, my eyes take in the letters and throw that information to the occipital lobe in the brain; however, as I'm reading, I'm also discussing things with myself. There is thought going on; that's the parietal lobe. I'm also verbalizing when I read whether I'm aware of it or not. If we measure the musculature, we are actually verbalizing when we read. You are actually reading to yourself so there are auditory sounds and, unless you can pronounce those words, it's going to be hard for you to read them because you have to pronounce them in your head in order to understand them. So, reading isn't just visual, it's auditory, visual, thought; these lobes have to come together in a function. In order to get that smoothly accomplished, you have to present the necessary challenges to the brain that make that integration function natural for the brain to do. The best example I know is learning to ride a bike. Balance, feeling, visual and auditory stimulation; all of these things have to come together in the brain."

Dr. Fadigan tells us "all learning is some kind of brain integration. If one has some part in the brain that is not fully integrated with another part and it's needed for learning, or a particular function, it can create an inability for one to complete a task or challenge successfully."

*Stick with Character*™ crosses the midline continuously with its stick work and "has the proper stimulation for the brain including visual and rapid movement, tracking, convergence, timing, and the oratory as you count to yourself while practicing the moves," and, according to Dr. Fadigan, this "challenges the integration in the brain." Dr. Fadigan recognizes that the magic of *Stick with Character*™ is "when the children see you do it, they want to do it. And, when they want to do it, they want to get better. So, you don't have to motivate them; they do it because the brain wants to do it, they need it, and it's fun…it is FUN!" Dr. Fadigan worked with the original team who put together Sesame Street so he knows that the most important thing is to be able to capture children's attention with your program because even the best program is ineffective if the kids do not stay engaged. Dr. Fadigan says of *Stick with Character*™ "you have to make it entertaining and naturally challenging to the kids and it has to be something they like to do...and you've done that in your program."

*Stick with Character™ and its Effects on ADD and ADHD*

According to Dr. Fadigan, "If you look up ADD, which is one of the common labels that we are putting on children, in a psych manual, you will see a variety of characteristics associated with defining ADD; however, the key factor of ADD is the fact that a child has trouble keeping their attention on a particular task. If you look up ADHD, you add an element of hyperactivity. In fact, in both cases, you have an element of hyperactivity; and, in both elements, the brain is not functioning to its full capacity in keeping its attention on things. *Stick with Character*™ helps to develop that. In one simple way, *SWC* makes students stay on task because it is fun and they are motivated to do it." As Dr. Fadigan explained to us, children will not stay on tasks where they expect to fail; if a child cannot do a task, he or she will avoid it because it makes them feel badly and they are blocked from learning. So, if the student is ADD, they do not want to stay on task because, in the final analysis, they fail at those tasks and they do not want to fail. *SWC* gives a child a successful learning experience from which they can build.

Now, with ADHD, something very interesting happens in the child's brain. According to Dr. Fadigan, when one puts their attention on a task, the brain stem gets the brain ready and arouses it (referred to as the arousal factor). The brain then gets energized and ready to carry out the task. In order for the arousal to come back down and neutralize itself, one must finish the task successfully. For a child who is having trouble finishing a task, due to under-developed brain integration, if he stops the task and does not finish, the arousal does not return to normal; it stays up fairly high. The student then starts a second task and does not complete it and the arousal goes up a little more. Starting and not completing a third task causes the arousal to go up even more. The student is now in a high state of arousal at all times. With this much arousal, the human body has one way to rid itself of this excess energy; it moves. One starts to get nervous, to pace, to tap, etc. The *Stick with Character*™ program helps kids to integrate their brain functions, enabling them to learn and focus better, and helping them to close tasks successfully thereby not building up a state of arousal in the body; *SWC* will help to reduce ADD and ADHD to the extent that students can perform better in learning situations and close more tasks. *SWC* helps a child learn to complete tasks and to relieve some of their arousal through the very movement of the program; this is a significant form of success for all students.

*Enhancing Learning and Results with Stick with Character*™

Dr. Fadigan has observed our *Stick with Character*™ program and has recognized that the program has "a natural measurement of the rate at which you are getting the improvement because empirically the results are there if the students can do the stick work." Dr. Fadigan also sees that our program enhances and improves learning in that "the students want to do the program because naturally they want that challenge but they also want to be like the other people in the room and do it a little better than those people." According to brain research, one of the indicators of a brain's readiness for acquiring new tasks (learning) is the measure of balance and coordination in the body; therefore, when we improve a student's balance and coordination, we improve their ability to learn. With *Stick with Character*™, when the student is constantly being challenged to utilize integrative functions in the brain, and is constantly learning and improving, and we are bringing all the brain functions together, the student is literally learning to learn. Dr. Fadigan tells us that teachers and parents will see noticeable improvements within one month in students' reading, self-esteem, handwriting, spelling, and making certain sounds (phonetic awareness). Ideally, you want to have students do the *SWC* program for 20 minutes three times per week; if you do it less often, you will still see improvements but they will take longer. Also, according to Dr. Fadigan, we can stimulate the brain at any time in life; if anyone at any age does the *SWC* program, they will improve their learning ability and their mental sharpness (short-term memory).

*Endorsement by Dr. James Fadigan*

Dr. Fadigan has researched the brain and its amazing recuperative powers for more than two decades. Dr. Fadigan has seen dozens of programs developed and targeted at improving brain integration and, therefore, learning abilities. Dr. Fadigan sees the *Stick with Character*™ program as an exceptional vehicle for improving one's ability to learn and close tasks successfully because it combines the critical factors of engaging students in wanting to participate as well as stimulating, challenging, and developing the brain. Dr. Fadigan adds that the *SWC* program also provides very low-cost and easily obtainable equipment and guidance while getting students to do the program and do it right so as to get proper stimulation for the brain. This is one more tool that can really help parents and teachers help their children that aids in removing everyone's guilt and frustration. Because of all these elements, Dr. Fadigan believes *SWC* "is a nice combination of positive factors, which you offer in a relatively inexpensive and simple way, that gives real results that can be measured. I endorse it completely."