The Head Bone is Connected!

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Connecting the brain and the body in our schools should be directed by the school Physical Educator. We are the natural link between the body and the brain since students simultaneously use both in our classes. The Physical Educator is the natural leader in promoting these activities. It is this person who should be taking the lead to show how movement anchors the daily classroom lesson. Twenty plus years of brain based research supports the move in this direction\(^1\). We have a golden opportunity to be on the cutting edge in education.

The following are actual school based programs that are currently being conducted. These programs are as much a public information program as they are academic enhancement. Will you accept the challenge? Will you be your school’s educational leader?

**Morning Announcements.** As part of the Principal’s daily, morning announcements every classroom does three Brain Gym® exercises: Thinking Caps, Hook Ups and Lazy 8’s. **Thinking Caps** stimulate the auditory brain center preparing the student to be a better listener.

**Hook Ups** are a cross lateral, deep breathing exercise to pump more oxygen into the brain, electrically stimulating both right and left brain hemispheres.

**Lazy 8’s** are an eye muscle stretching exercise used to warm the eye socket muscles, which have been found to improve reading speed. A current research project is underway to see if the faster reading speed also equates to improved comprehension.

**Physical Education Class Warm Ups.** Following the daily warm ups prior to Physical Education class activity, students perform the three Brain Gym® exercises described above. The instructor periodically reminds students of the exercise value for reinforcement. The value in Physical Education class is the same value these exercises serve in the classroom. We want good listeners, a whole brain and loose eye muscles for improved peripheral vision.

**SOL Test Warm Ups.** This is a powerful promotion tool for Physical Educators. As school administrators struggle to meet Annual Yearly Progress (AYP) and raise test scores this is a brilliant addition to the school wide effort. And it places the Physical Educator in the spotlight as an academic leader.

On the morning of a grade level test, all classes come to the gym at 8:00 a.m. for a thirty minute brain/body warm up. My school has three to four classes per grade level. Four stations are set up in the gym. Each activity station lasts five minutes, with rotations between the stations. At the end of 20 minutes all activity is complete. High beat music is played during the 20 minutes.

The outside perimeter stations are power walking laps, with two classes beginning here, one at the north corner and one at the south corner. The other two stations are located on each half of the gym floor, divided by the center line. These activities change every time this grade level returns for another test day. Activities can range from jumping single ropes, juggling, scooter activities, partner toss and catch. No one ever stands still.

At the end of the twenty minutes of activity stations the students participate in the final five minute relaxation phase. Students are invited to sit or lie down, but eyes must be closed. This prevents some students from acting up or disturbing others nearby, and better insures they are relaxing. Slow beat music is played for the final five minute phase. Slow beat music allows for greater relaxation. There has been much written about the Mozart Effect on the brain, however, I believe any music that has low beats per minute achieves the same calming effect for this activity. With 3-5 minutes remaining the students spread out on the gym floor and begin their three brain exercises (listed above) when instructed.

This completes the 30 minute SOL Warm Up class. Students are then dismissed to their teacher for a water and restroom break before their test begins. The results have been so positive classroom teachers are asking for a similar program for other required grade level tests.

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2 O'Donnell, Laurence; Music and the Brain 2009, Brain Power web site [www.cerebromente.org.br/n15/mente/musica.html](http://www.cerebromente.org.br/n15/mente/musica.html)
Brains on the Web. My school’s web page is loaded with all sorts of information and links to inform parents and students. There are P.E. Newsletters, which also appear in the monthly printed school newsletter. The Physical Education program is the only Special that appears in each monthly issue. As importantly, there is a Brain News column and a Nutrition News column linking the importance of the brain and body. With our diverse school population the news appears in English and Spanish.

e-Brain News. I research and produce this free newsletter that goes out to teachers. Besides the entire school staff, it goes to county administrators, as well as, educators and administrators across the United States. Wherever I have given brain based learning presentations those attendees are invited to give their e-mail address to be placed on the receiving list. Would you like to be on the list? Send me your e-mail address.

While much of the information is classroom related, it is important for the Physical Educator to remember they should be the key player, the center of the school universe if you will, for disseminating and teaching about this connection. Almost none of us have had any formal education in the brain field, so this is a golden opportunity for the Physical Educator to show that their program is just as necessary as the other core academic subjects. We must teach the classroom teachers and administrators. Movement is a new method of anchoring their classroom learning.
**County and School Presentations.** One year a colleague and I were invited to present to all the elementary school Principals. I sold my Principal so many times he arranged for the presentation with the county supervisor for elementary education. Again, few of these folks knew much about the human brain and how the current knowledge base could support them and their staff in teaching children. We definitely had their attention! From that meeting several invitations have come from other Principals to present to school teacher in-services.

We presented to both general education and physical education teacher county-wide fall teacher in-service meetings. We have presented to over 200 county summer school teachers in April 2009. The county supervisor for this group heard us speak at the elementary principal’s meeting.

A Physical Educator at a large middle school convinced her Principal to have me present the SOL program to his administrative staff.

Staff Development sessions have been given every few years to both update returning staff and initially inform new staff. This year I am presenting at each monthly staff meeting.

**Public Information.** The SOL Brain Warm Ups have been featured on the county web page, with pictures and articles in both local papers and the Washington Post Newspaper. The key is for the Physical Educator to literally brain storm (defined as a Transitory Agitation of the Mind) every possible way to sell the brain/body connection. I have yet to meet a teacher or administrator who is not receptive to wanting to improve a child’s ability to learn. Never before has our opportunity been so strong as to be the educational leader.
Brain Research. Two research projects have been conducted and a third is underway at my school. The research question is can an eye muscle exercise (Lazy 8) improve reading skills? The first year one class of 24 students was selected for the research study. I met with each of the nine students individually before school (7:50 a.m. upon arrival) and sat with each one in the hall outside their classroom. The classroom teacher gave them an appropriate reading level book based on their tested reading level from the Developmental Reading Assessment series (DRA). Students were instructed to read aloud for one minute. I used a stop watch and a Running Record Form to record the total words read aloud in one minute. Students were instructed to skip over words they could not pronounce. At the end of the timed minute they performed a series of Lazy 8’s.

Beginning where they left off in the book they began to read aloud for another timed minute. In 100% of all reading trials (2 per student over the course of about two months) every student improved the number of words read per minute after the Lazy 8 exercise as compared to before the exercise.

The conclusion was that loosening the eye muscles allowed the eyes to flow more freely during reading. The second year the study was replicated using one class per grade level, 22-25 students, to check for consistency over a range of ages and reading abilities.

Again, similar improvements were achieved when comparing the first and second readings. The range of words per minute were from the high teens to the high fifty words per minute. The average was approximately 25 words per minute increase after the Lazy 8 exercise.

The 2009-10 study takes another step forward by also checking for comprehension of what is read faster. The principal has been an integral part in the design, which includes one of the school Reading Specialists. This year a select group of nine “Struggling Readers” in grades three and four make up the study group. The Physical Educator and Reading Specialist are working together with these students once a week before the morning bell. The Lazy 8 exercise will be used again along with a set of comprehension checking questions the student will be asked at the end of the reading passage.
Loudoun County Public Schools has a Research Office. One of the provisions of this office is to offer approved, guided teacher research. Monthly meetings are held to assist teachers as they set up and conduct their research. The Research Office must approve all such research studies on children. Recertification points are also awarded to the teacher researcher. Each spring the Loudoun County Teacher Researchers are invited to attend and present at the annual Fairfax Teacher Researcher Conference.

Summary

Can you see the important role the Physical Educator can play in the connection of the brain and body throughout the school? You are urged to take on this role, to promote Physical Education as the core to the core.

Could your county use a teacher in-service on brain based learning? As another means of advancing the research and including movement activities into the core curriculum, present this information to administrators in your school and your county. They would include not only the HPE supervisor, but the administrator in charge of elementary education, summer school teachers, or even the administrator in charge of principals.

Keep in mind all of these activities did not happen overnight. Selling sometimes surfaces skepticism at worst, and curiosity at best. Small bites make for better digestion, so pick one of the ideas listed here and give it a try. The author strongly recommends the SOL Brain Warm Up for the greatest initial impact in your school.

With the abundant amount of brain research available to support our curriculum, it is my opinion that it is time to re-write the elementary P.E. curriculum to include integrated movement activities that helps anchor the core subjects. We are in the brain business, and we now have the research that shows movement is important to all learning. Anchor away!
