**Wandering Minds**

In “Everyday Pedagogy: Lessons from Basketball, Track, and Dominoes” (March), Na’ilah Suad Nasir does a good job of outlining a topic I have discussed often with curriculum people. Some respond by saying, “Wait! Students volunteer to play basketball or track; they have to take our English and mathematics classes.” My rejoinder is simple: “No, they decide every day whether to take your English and math classes. We can make the body sit in the chair, but we cannot make them volunteer their minds.” — James H. VanSeiver, director of secondary education, Seaford School District, Seaford, Del.

**Badly Argued Appeal**

Eric Jensen’s February article, “A Fresh Look at Brain-Based Education,” is the same old badly argued appeal for educators to make much more of the very little that is currently known about how the brain works. A clue to the weakness of his arguments is his frequent repetition (apparently because he considers it a very important point) of the assertion that “the brain is involved in everything we do at school,” a point that Dan Willingham, in his article in the same issue, correctly notes “is true, but trivially so.” One of the most obviously spurious statements of Mr. Jensen’s trivial argument is “If the research involves the brain in any way, it is ‘brain-based.’ The brain is involved in everything we do.” Jensen apparently believes that any finding in any research of any kind (involving a person or any other being with a brain) must be “brain-based.” If “brain-based” means everything, then, of course, it means nothing. What are we talking about here?

Mr. Jensen also frequently refers to “turf-based” arguments, by which he means arguments that note the overwhelming lack of proven connections between findings in neuroscience (the study of the actual brain) and findings in psychology and other disciplines. Yes, scientists are working on these connections, but very little is actually known about the connections.

Rather than argue in detail with Mr. Jensen’s points, I refer the reader to Mr. Willingham’s article I mentioned above and to John Bruer’s 2006 article cited in the first endnote of Mr. Jensen’s article. I hope that responsible educators will continue to be responsible evaluators of scientific claims. An open-minded critical reading of the articles by Mr. Jensen, Mr. Willingham, and Mr. Bruer ought to clarify what we know and don’t know about the possible application of brain research to instruction. — Paul Regnier, coordinator, Office of Community Relations, Fairfax Community Public Schools, Falls Church, Va.

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**The Author Responds**

I appreciate Paul Regnier’s taking the time to respond to my February article. Unfortunately, I am dumbfounded at the statements made. Mr. Regnier supports Dan Willingham’s comment (I’m paraphrasing) that the brain is involved in everything we do at school *but trivially so* (emphasis added). This comment about the lack of relationship between our central nervous system and our school behaviors is incomprehensibly illogical and even preposterous. Responsible educators who stay current know better.

Studies by Bob Jacobs and his colleagues (1993) at UCLA showed correlations between the amount of schooling and dendritic formation. Elise Temple and her colleagues (2003) showed that a strategic reading program changes brain activations and neural connections. Bogdan Draganski and his colleagues (2006) showed correlations between intensity of study patterns and brain mass. Hweeling Lee led a team (2007) that showed anatomical traces of vocabulary acquisition in the adolescent brain based on instruction. Everything we do at school changes the brain, either for the better or for the worse.

When told that we know very little about the brain, I’d ask, “Compared to what?” Over 37,000 neuroscientists in 102 countries publish over 77,000 studies annually. Compared to 25 or 50 years ago, I’d say we know a lot. We know enough that it justified Harvard’s offering a master’s and doctorate in brain-based education. Entire peer-reviewed journals are dedicated to the effects on the brain of social situations (e.g., school), nutrition (e.g., school cafeteria), and cognition and instruction (e.g., reading and vocabulary skills).

To dismiss the relationship between school policies (and instructional strategies) and the brain is irresponsible. We know, for example, that social interactions influence levels of cortisol and serotonin. We know how to optimize skill-learning, explicit memory, and the effect of physical activity on cognition. The list of school-wide brain-based connections is long. Having said this,
I agree with Mr. Regnier that we need far better interdisciplinary research to tie together more of the loose ends. That will happen over time. — Eric Jensen.

**A Simple Question**

In response to the February section on brain-based education, I must ask, Wouldn’t it be logical to base our education system on how the brain learns? The October 1986 *Kappan* contained a report on how Drew Elementary (K-5) had implemented a brain-compatible curriculum. The principal and staff based their program on Leslie Hart’s studies of learning. The result was that 99% of the students scored in the 90th percentile on standardized testing and at the 99th percentile in math. Before jumping to demographic conclusions, though, consider that almost 30% of the students were immigrants from Eastern Europe and Central America and that the local economy was based on potato farming. And their curriculum had nothing to do with teaching to the test.

I thought at the time that this was the future of education. Yet here we are some 20 years later floundering around trying to raise test scores by a few percentiles with pretty much the same mystical methods that have been used for over a hundred years.

Brain-compatible methods got mixed up in the excitement over discoveries in neuroscience, which, to be sure, are fascinating — but often not that applicable to a room of 25 fourth-graders. Based on observations of how the brain functions, Hart and some dozen other cognitive psychologists worked to derive effective principles of learning that could be applied in schools. His best book, *How the Brain Works*, deliberately focused on explaining how the brain learns and applying those concepts to education, which led to Drew Elementary’s remarkable success. I don’t know of anything that has superseded these principles in the intervening years. The book should be a standard Ed 101 text, but as Hart wrote, “We have the absurd circumstance that those entrusted with the ‘professional’ task of educating . . . evidence almost total ignorance of how the human brain came to be and how it works.” — Randy S. Huntley, via e-mail.

**The Author Responds**

Randy Huntley’s comment about many teachers “educating with . . . almost total ignorance of how the human brain came to be and how it works” is right on the money. In a parallel situation, medical advances come with new insights, research, and understandings. But until Western medicine (the disease model, based on matter and Newtonian physics) and Eastern medicine (the healing model, based on energy and the quantum model) become one integrated model, we’ll never gain real mastery over both prevention and healing. In the same way, we’ll make the progress that students deserve when we develop and implement a national platform for learning, teaching, and assessment that is based more closely on the actual neurobiology of kids’ brains. While there is much we don’t know, and while I would never advocate that a school make 100% of its decisions based on neurobiology or cognitive science, it would be far more substantial, targeted, and reliable than what we have now. — Eric Jensen.