

Preface

The logic of it all, or lack thereof, continues to elude me. After years of hard scientific data containing the potential to revolutionize the way teaching and instruction are carried out, our educational system struggles to stop revolving in the same old circles. While it has been implied by the findings of neuroscience that the brain's true learning potential is actually thwarted and mishandled through the use of traditional instruction methods that fragment and dehumanize learning, we too frequently see these methods employed. These conundrums challenge the best teachers and schools to lead their learning communities to better practices that respect the natural learning processes of students. Likewise, questions are raised by students in my university education classes. My students, after being schooled in the logic of brain-compatible learning, frequently find in the field that they are required to use textbooks that cover too many learner outcomes, and employ worksheets to reinforce this "learning." The explanation for the disconnects most probably lies with the pressure on teachers and schools, in spite of what scientific research has indicated to be best for students, to "teach to the test."

Our nation continues to languish in the midst of a crisis of accountability. The No Child Left Behind Act of 2001 has not helped. By emphasizing test results at the expense of true comprehension, students are being taught via methods that exacerbate the very problem that dedicated educators have been striving so hard to correct.

Standardized testing goes back to the early twentieth century when the perceived need for a certain measure of objectivity in assessment gave rise to the "scientific testing movement." The result of this movement was the standardized test: a mass-produced, multiple-choice examination that could be administered to large numbers of individuals with consistent results. The standardized test became the assessment tool of choice for monitoring school quality and continues to drive the machine that prevents us from realizing student potential. Our current testing environment originates with a laudable national determination to make education more equitable and close the gap between high and low achievers, particularly for identified student populations that experience lower success than others. The intent was to shine a bright light of accountability that would require that all students be taught well and in ways that they could learn. Unfortunately, when schools are held captive to tests as the sole measure to quantify learning according to standardized norms and

that sort students according to their abilities to memorize disconnected facts and algorithms, true learning cannot flourish.

As good teachers and learners know, real and enduring knowledge is much more than an ability to manipulate a mathematical formula out of context or recognize a list of word definitions. Real learning is about the learner's ability to apply learned skills to real-life, contextual settings. True understanding is best represented by the learner's ability to solve unfamiliar problems that have no clear-cut, neat answers, problems that are unpredictable and that entail an ability to extrapolate from existing knowledge to create novel and unique solutions.

Measurement of the development of such knowledge in students cannot be ascertained through traditional assessment methods alone. To rely on large-scale, standardized tests as the single, most important indicator of learning progress is to put us at risk of lagging behind our global counterparts. Each child, like a snowflake, is a unique individual with his or her brain preferring a particular learning style, possessing an array of intelligences, as well as sets of both learned and innate abilities. If each one of them is so singular, we cannot rely entirely on a "one-size-fits-all" assessment method.

If assessment and "teaching to the test" are what drives the educational system, then it is time to make assessment the place to begin the motion of change. Educators can consistently balance required standardized assessments with ongoing alternative assessment methods that are compatible with the way the brain learns and contain and employ rigorous standards and high challenge levels. Only then can veteran and fledgling teachers alike initiate the changes needed to educate our students to be successful citizens in the twenty-first century.

—Diane Ronis