

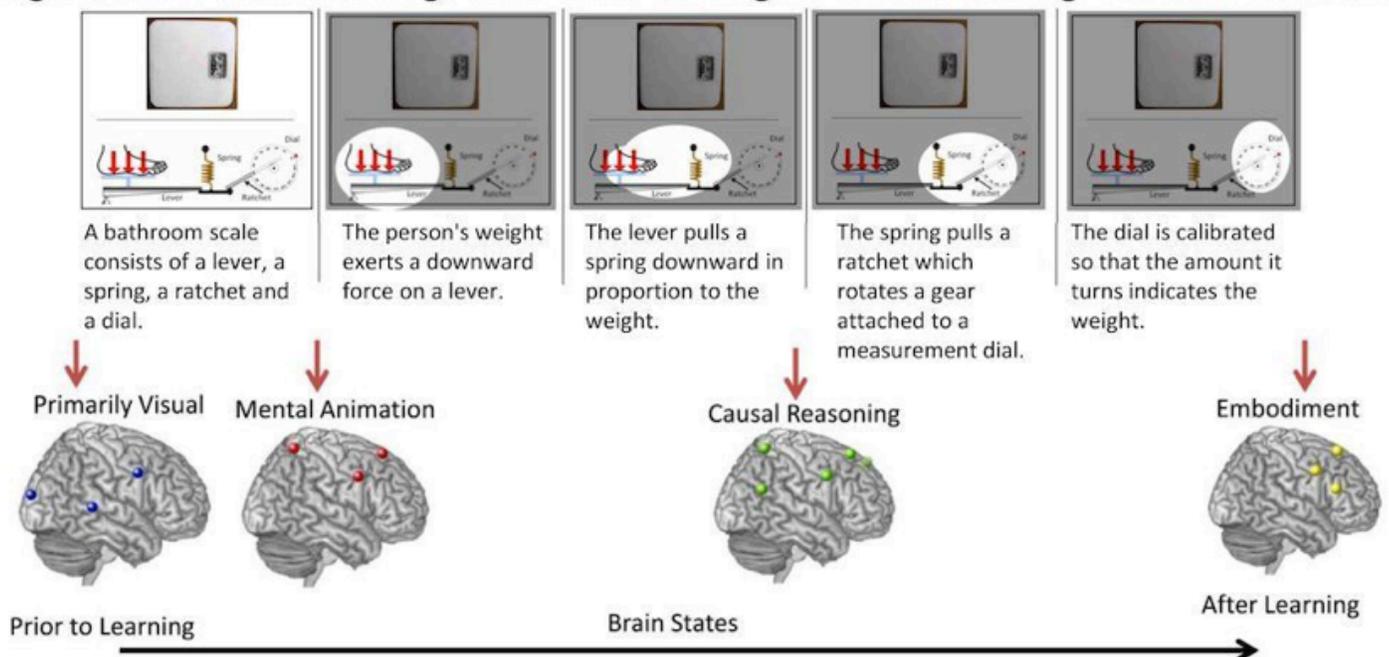
FROM THE ACADEMIC DEAN: A Test Worth Teaching To

Recently, I received an email from a nationally recognized test prep company, which opened with the following: "For many students, performance on the SAT exam determines whether or not their future is the one for which they've planned and prepared." The mixture of loaded language ("determines" and "future") clearly plays into the hopes and fears and anxiety created by the test-prep industry as well as the opacity of the college application/admissions process. Add to that dynamic the increased emphasis on high-stakes tests that followed the publication of [A Nation At Risk](#) in 1983, which launched a string of initiatives from the Improving America's Schools Act to No Child Left Behind to the Common Core State Standards and the Next Generation Science Standards, and it becomes clear why the phrase teaching to the test pervades the education conversation. That phrase is full of negative connotations, mostly because it infers drill-and-kill test preparation at the expense of authentic, meaningful learning. But a professor of mine once told me, teaching to the test is not the problem; rather it is teaching to a bad test that is problematic. Start by designing a good test, and then teach in support of that test's desired outcomes.

Scholar [Robert Sternberg](#), an expert on intelligence, reminds us: "Traditional standardized tests, and even school grades, give us good information about some valued skills of students, but practically no information about other valued skills. If we wish to develop students who will be the active citizens and future leaders of tomorrow, we need to measure a broader range of skills important to future success — not just the memory and analytical skills measured by standardized tests, but also creative, practical, and wisdom-based skills."

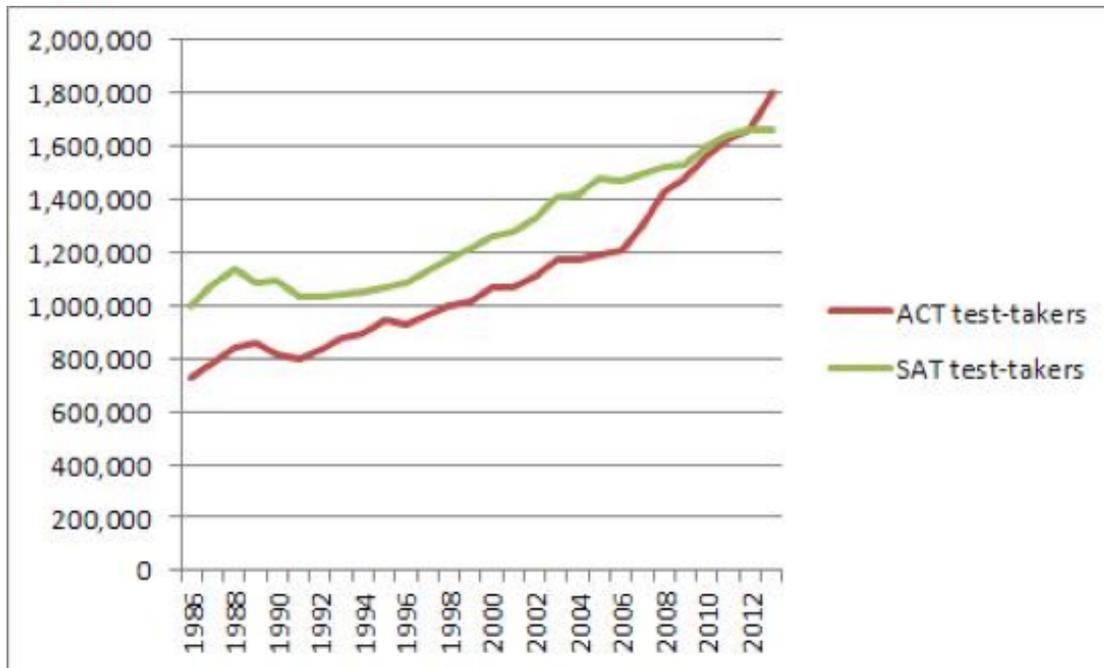
Calls for a re-visioning of what we value and what we measure in education are bolstered further by developments in neuroscience research leveraging fMRI. A recent article, "[See How Your Brain Morphs When You Learn Physics](#)," references a [Carnegie Mellon Study](#), that highlights knowledge states identified by their fMRI signature. The article suggests such "findings could have implications for student testing and measuring knowledge." Since "standardized tests compare a student's knowledge to an answer sheet," the article reminds us, "often that can involve what's known as 'teaching to the test,' or engaging students in rote memorization and [test-taking exercises](#), instead of exercises to master the concepts." But new fMRI research raises this possibility: "What if instead, you could measure an expert's brain when they think about the topic, or the teacher's brain, and then compare the students' fMRI's? That would be a true test of comprehension" says a co-author of the study, Robert Mason. "We may be able to assess how well a person's brain has learned a concept by matching it to the expert's brain," continues Mason; however, he adds, "That said, this would be extremely expensive [...] and is unlikely to actually happen."

Progressions of brain knowledge states while learning the internal workings of a bathroom scale



-Image courtesy of Carnegie Mellon University

So what is likely to happen? To be sure, testing is in the midst of a great shift, a process of growth and development, and the conversation related to that shift centers on two critical questions: What do we value?, and How do we measure what we value? It's an exciting time in education, but also one of some uncertainty. As such, task forces are being convened to ensure best-practices are followed. For instance, The California Association of Independent Schools, an organization of which York is a member, in recognition that "determining the quality of students' engagement and their growth as learners — is a central task at every school," recently published these [Assessment Resources](#). Meanwhile, the College Board is [changing](#) its AP courses and exams. And the dominance of the SAT (in the East and West) as the preeminent standardized test has now been surpassed by the popularity of the ACT (what used to be the MidWest favorite).



-Courtesy of The National Center for Fair and Open Testing

In addition to the rising popularity of the ACT over the SAT, research is also calling into question the validity of the SAT. While the "[SAT] has a significant number of reliability and validity studies that corroborate its efficacy in predicting a student's GPA in the first year of college" (Benjamin 2013), the National Association for College Admission Counseling (NACAC) reports "There is no significant difference in the success rates of students who submit their standardized test scores to colleges and those who don't, according to '[Defining Promise: Optional Standardized Testing Policies in American College and University Admissions](#).' In the study of colleges with test optional admission policies, there were no significant differences in either cumulative GPA or graduation rates between submitters and non-submitters." Furthermore, according to the [National Center for Fair & Open Testing](#) (FairTest), "the revised [SAT] will not predict college success more accurately, assess low-income students more fairly, or be less susceptible to high-priced commercial coaching courses." Currently, [more than 800](#) institutions do not require ACT or SAT scores to make admissions decisions.

Still, the SAT is well-marketed as we see in this promotional [video](#), but I find the following [history of the SAT](#) (a must read overview) from Frontline "Secret's of the SAT" far more informative. In that 1999 program, John Katzman, founder of the Princeton Review, calls the SAT "a scam" in his [interview](#). That claim goes too far, in my opinion, but it reminds us of the controversy surrounding the SAT. As Anya Kamenetz reports in her latest book, "[The Test: Why Our Schools Are Obsessed With Standardized Testing — But You Don't Have to Be](#)" throughout its history, "the SAT's 'A' has stood for 'aptitude,' 'assessment,' and 'achievement,' and today SAT, like KFC, stands only for itself." The scores on achievement tests, such as the SAT and the ACT, are supposed to correlate with grades earned in high school, so for decades the SAT has functioned primarily as an admissions tool for colleges and universities. Therefore, its redesign seeks to maintain the SAT's place as an instrument for assessing college readiness.

According to David Coleman, the 9th President of the College Board and a key architect of the Common Core, "[\[The new SAT\]](#) will be the first admission exam that requires students to cite evidence in support of their understanding of texts in both reading and writing. There will be real-world applications." The key phrase there is real-world application, and in my opinion (and that of many other educators with a keen interest in assessment) the SATs embrace of citing evidence and real-world application comes from the growing recognition of the [College Work & Readiness Assessment](#) as a better instrument for assessing critical thinking.

The CWRA is designed by some of the nation's leading psychometricians to assist high schools and colleges in the process of ascertaining how well students are able to think critically, problem-solve, use scientific and quantitative reasoning, critique and make arguments, and write. The CWRA requires 90 minutes, utilizes Performance Tasks, and is delivered online.

After careful consideration and several years of study, York adopted the CWRA in 2011 as an internal diagnostic instrument: We reflect upon student results and consider opportunities for growth in teaching and learning. Harvard University's Dr. Tony Wagner states, "when it comes to the forward thinking model for American schools and colleges to watch, CWRA is really in a class by itself" ("The Global Search for Education. If Not the SAT, What?")

What does the CWRA measure in comparison to what the SAT measures? Dr. Roger Benjamin, president of the Council for Aid to Education, home of the CWRA, explains: "The SAT measures the aptitude high school seniors have for doing well in college through reasoning and verbal abilities tests. The CWRA measures high school students' critical thinking, analytical and quantitative reasoning skills, problem solving, writing mechanics and writing persuasiveness skills that educators and employers believe high school graduates need to have to succeed in college and work."

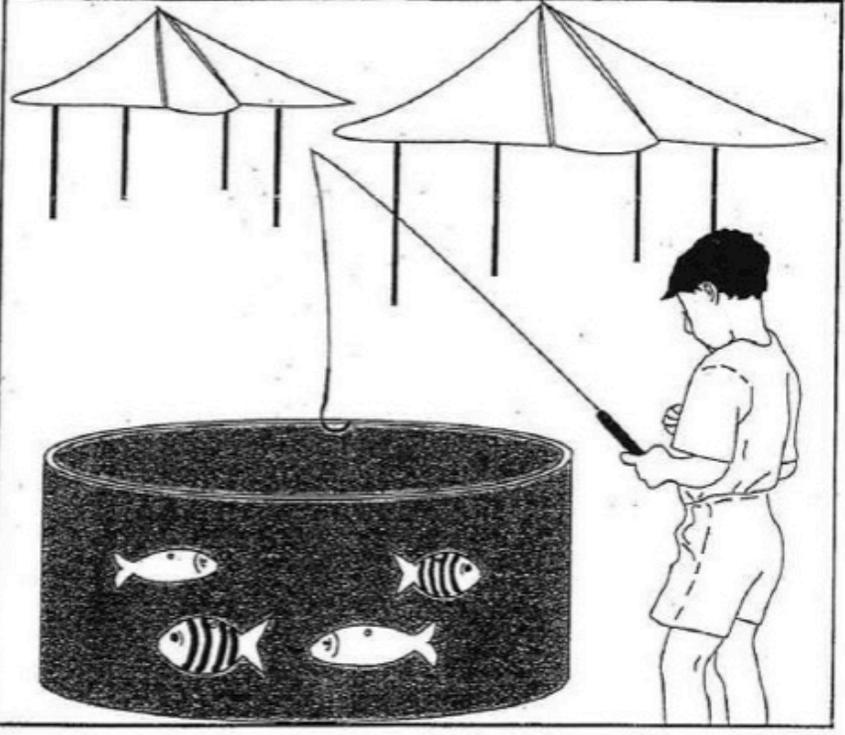
Moreover, owing to the CWRA's use of [Performance Tasks](#), Benjamin points out, "The CWRA is more congruent with the requirements of today's "Knowledge Economy" in which it is more important to be able to access, structure and use information than to only accumulate facts. Multiple-choice questions require the ability to recognize a painting. In comparison, performance tasks require the student to paint. Definitions of learning have shifted to the ability to apply what one knows to new situations. Performance assessments capture this change."

While the image to the right is not a sample item from the CWRA document library, I have found it helps people recognize the limitations of multiple choice (one correct answer), which can stifle student expression of novel thought, creativity, and innovative problem-solving.

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MATHEMATICS

7. At the school fair, Scott hopes to catch a fish that has stripes. What are the chances that he will catch a striped fish?



M Lv2- FI-7

Scott's chances of catching a striped fish are Bad

Explain your answer. well the striped fishes are moving away from the hook and Scott doesn't have any bait on his hook.

-Courtesy of Council for Aid to Education

PSAT, SAT, and ACT comparison data show York students outperform state and national averages. CWRA data also indicates York high achievement when compared to participating high schools, colleges, and universities. Will the CWRA in time become a performance measure for college admissions? It is being considered. For now, York does not consider the CWRA, the SAT, or the ACT with an either/or frame of mind; we prefer a both/and approach as important metrics in a comprehensive system of assessment.

If you'd like to read more about the design of and philosophy behind the CWRA please follow these links:

http://cae.org/images/uploads/pdf/Introduction_to_CWRA_Plus.pdf
<http://cae.org/students/high-school-student/>