Washington Post, "The Answer Sheet" blog by Valerie Strauss
Posted at 04:00 AM ET, 08/29/2011

Warring learning theories: Choose yours

By Marion Brady

The rich philanthropists, hedge fund managers, state governors, big-city mayors, and syndicated columnists now shaping national education policy have reached a firm conclusion. The Number One factor in student performance is teacher performance.

Poverty, broken homes, lead and mercury poisoning, bad teeth, poor eyesight, language difficulties, hunger, low self-esteem, run-down schools, frequent moving, cultural differences, class size—well, yes, those are problems—BUT A TEACHER WHO IS REALLY ON THE BALL CAN LIFT THOSE SCORES!

So fire the worst, and put the rest on notice. Tell them to either get with it or get out. Bring out the market force carrots and sticks—merit pay, school grades, public humiliation, endless checklists, non-stop testing—and goodbye if they don't work. Competition made America great, so pit kid against kid, teacher against teacher, school against school, state against state, nation against nation!

Keep that great teacher in mind as you read this post I got a few days ago from Dr. William Webb, Director of The Center for Educational Options. Bill and his staff operate an alternative school in rural Henry County, Kentucky. bill.webb@henry.kyschools.us

"…the students decided to acquaint themselves in a more mindful way with a small commons area located between our building and the high school. Working in teams of 4, the students were first asked simply to describe the area linguistically. They were mildly surprised to realize that a simple verbal description was not simple at all. The boundary of the area was established beforehand, and yet descriptions varied considerably from group to group. Landmarks that seemed important to one group were virtually ignored by another. Estimates of distance were wildly inaccurate. Words chosen to describe some aspect of the environment were imprecise and vague ("There's a small hill a little bit behind our trailer that's pretty steep."). Listening to each group's verbal descriptions, no one needed a curriculum or assessment expert to define the "lesson targets." The important questions were obvious. How do we account for the differences in descriptions? How do we reconcile these differences to come to a shared "perception" of our environment? Why is it important to be precise in describing our surroundings? How do differing perceptions of our immediate surroundings influence the way we interact with each other? A host of other questions were asked and answered in the follow-up discussion to this "simple" exercise…

Moreover, student involvement during this discussion was profoundly different from the typical high school classroom interactions. Freed from the cognitive task of memorizing facts, our students argued and conceded and elaborated and prioritized and paraphrased and deduced and just about every other verb that the Bloom taxonomists say are important illustrators of learning. And they were doing it in the context of an authentic task with real-life implications.

Once the students had settled on a verbal description of the commons area, they were asked to draw a diagram of the area to scale. Not one student had any experience with that exercise. Most were math phobic, having been spectacularly unsuccessful in the math courses taught in the traditional classroom. But having spent the past few days thinking about their environment in a more mindful way, they were motivated to tackle this assignment. Armed with 50' tape measures, they had little trouble measuring the lines that defined the area's boundary. But connecting those lines in a scaled representation of the area presented some challenges. One challenge was the way one adjacent building jutted into the space the students were detailing. In order for the scaled drawing to come out right, the angle that the building "interrupted" the space had to be accurately defined—and it wasn't an obvious right angle. With no way to use a protractor, the students were stymied. Attempts to use their limited knowledge of geometry to find a mathematical solution were futile. Solutions on the Internet were too technical in their language to be helpful. And then, in a flash of insight, one student (whose math skills had been assessed by standardized testing measures as being in the lowest "novice" range) ran into the classroom and returned with a block of modeling clay which he proceeded to shape around the building's corner. Once he had "modeled" the angle in this way, it was a simple matter of transferring the angle to a piece of paper which could now be measured with the protractor. Voila!! The satisfaction this student felt at finding that solution and the affirmation he received from his classmates was a brand new experience. He felt smart. He was smart…

One other example:

As previously mentioned, the students were asked to draw a scaled diagram of the commons area they had chosen to investigate. This, of course, was a ratio and proportions exercise most likely introduced to students in elementary school. But our math-challenged students approached this assignment as if they had been asked to prove the Pythagorean Theorem. A freshman girl (let's call her Kayla) with a neurotic aversion to all things mathematic, watched quietly while the other three (somewhat mathematically challenged) members of her group struggled to work through the steps for converting their measurements to the scaled drawing. After looking at their measurements and the size of the graph paper they were required to use, they decided that 8 feet of measured distance should be 1 inch on the drawing. There were dozens of measurements—2'9'', 47'3'', 9'4'', etc. The teachers were no help. The students were on their own to figure this out. Normally, Kayla tuned out when presented with an assignment from a math book, engaging in all manner of avoidance (and class distracting) behaviors. But this was different…a problem, for sure, but not just a math problem. So, Kayla listened differently and she watched as different strategies were tried, and then—she got it! ***"We gotta make everything inches, and then we have to divide by 96!''*** *She showed her group mates. It was a special moment and nearly impossible to describe. Normally a bit histrionic in her actions, Kayla seemed more centered, more authentic, in her excitement and enthusiasm at discovering this hidden skill. She was clearly enjoying feelings of competence that she rarely experienced in the school setting, let alone while doing math. She liked how it felt. She insisted on doing all the conversions herself, working without a break through part of her lunch period to finish…"*

If that's not a dazzling description of real learning taking place, I've never read one.

Several years ago, my brother and I wrote an instructional program titled *Connections: Investigating Reality*. It's a how-to manual for middle and high school kids and teachers that uses

firsthand, "right here, right now," real-world experience to teach useful, complex ideas, ideas that deal with, but also go beyond, the usual school subjects.

We put *Connections* on the Internet, allowed it to be downloaded free of charge (no strings attached), and invited users to help us improve it. http://www.marionbrady.com/Connections-InvestigatingReality-ACourseofStudy.asp

Dr. Webb was the first person to take us up on our offer. I asked him to comment about *Connections*, hoping his account would help explain the radical difference a theory of learning can make. I've quoted most of his response. The whole of it is at http://www.marionbrady.com/documents/DrWilliamWebb-Testimonial.pdf

In his account, where are the teachers? "The students decided…" "Once the students had settled on…" "The teachers were no help." "The students were on their own…"

The learning theory that has kids worldwide sitting for hours a day "covering the material" says that what's taught should be broken apart into easy-to-remember fragments. The fragments should then be sorted by subject, then sorted again, and again, and again, down to a level of specificity that allows each fragment to be an item on a multiple choice test.

This is the learning theory that explains the "standards and accountability" fad. It's the theory that explains why nearly every state has now adopted the Common Core State Standards. It's the theory that explains why learner memory looms so large in testing, to the neglect of insight, imagination, and ingenuity. It's the theory that explains why billions of taxpayer dollars are being spent on standardized tests.

Here's a very different learning theory: The brain LIKES what it finds when the infant it inhabits is born. It LIKES complexity, likes the challenge of exploring raw experience in search of meaningful patterns, regularities, and relationships. In short, the brain likes the process of sense-making.

The first theory can't explain why little kids learn so much in the first months and years of life, can't explain Kayla's sudden interest in learning, can't explain the other student behavior Bill describes.

The second theory says it's natural.

The second theory is why people who actually know something about educating believe in old-fashioned free play and old fashioned kindergarten. It's why they believe in cutting teachers enough slack to let them do what needs doing, and why they cringe or roll their eyes when the new "reformers" preach about the need for "rigor" and for "raising the bar." It's why they opposed No Child Left Behind, now oppose Race to the Top, and oppose just about everything else related to education that the Business Roundtable and the U.S. Chamber of Commerce have been selling Congress and state legislators for the past twenty years.

The two theories aren't compatible. There's a choice to be made. If H.G. Wells was right, and human history is a race between education and catastrophe, that choice could be the most important one this generation can make.