

Washington Post, “The Answer Sheet” blog by Valerie Strauss
Posted August 26, 2015

This could change everything about school — for kids, teachers and everybody else

By Marion and Howard Brady

Learning is challenging. Kids need to accept that life is a test and grit is essential to success. Competition builds character. A quiet school is a good school. Recess and leisurely lunchtimes are poor uses of valuable instructional time. Kindergarten should be the new first grade. Poverty is no excuse for poor performance. Retention in grade for under-performing kids just makes good sense. The root cause of academic decline is teachers’ low expectations. Rigor is the key to winning the Race to the Top.

So goes the conventional wisdom. Saying that learning is natural, that stress is counterproductive, that free play and the so-called “frill” subjects teach in powerful ways, that standardized tests are counterproductive, invites heated argument. To say that present corporately driven education policies have been a monumental waste of time, money, and talent invites being dismissed by those setting education policy as too out of touch with reality to deserve continued reading.

But hear us out. That first paragraph reflects a Puritanical view of human nature that, historically, Americans have tended to favor. No surprise then that those leading the “reform” effort believe the “test and punish, standards-and-accountability,” approach to schooling is a good, even a necessary, thing.

We start with a different assumption—that *true* learning is natural, deeply satisfying, and is its own reward. As evidence, we call attention to the fact that healthy kids start learning on their own as soon as they’re born, and continue at a spectacular rate long before they see the inside of a classroom. Not until they go to school and begin to be hammered with information of the “What Every First Grader (etc.) Should Know” sort, does their enthusiasm for learning begin to fade.

What is it about formal schooling that turns so many kids off? It may come as a surprise that the major problem is *a lack of mental stimulation*. Some of the work is too easy, some of it is simply neither interesting nor useful, and recently, much of what’s being touted as rigorous is merely onerous.

Blame most of kids’ negativity about school on lessons and homework that aren’t memorable, mind-changing experiences.

Three lesson essentials

In school, instructional activities—lessons—are where the rubber meets the road. That means (at least to us) that every lesson should make something important and

memorable happen in kids' heads. How little most adults remember and use of what they once supposedly learned suggests that relatively little of their schoolwork actually did that.

Lessons that stick and make a permanent difference in the mind usually share three characteristics.

First, they're "active." What makes "active learning" lessons active is the role assigned to learners. Traditional lessons treat them as passive receptacles of secondhand information. Active learning gives them intellectually demanding, real-world puzzles, problems, anomalies, situations, difficulties, and so on, and learning comes not secondhand from reading or listening, but firsthand, from *doing*, from wrestling with the puzzle, the problem, the difficulty, *for however long it takes*.

For...however...long...it...takes. Yes, compared with "covering the material," puzzle-solving is slow going. But learning is an extremely complex, little-understood process that can't be hurried or forced. It moves at the learner's pace or it doesn't move. Period. Authorities who mandate pacing guides, give teachers scripts to read, or demand that lesson plans be submitted days in advance of use, should be in a line of work other than education.

Second, the most memorable lessons focus on immediate reality. For learning to be *permanent*, the puzzles must be interesting *now*; the lessons they teach must be useful *now*.

The richest "textbook" isn't a textbook; it's the present moment. With few exceptions, every important idea taught in every school subject manifests itself in some concrete, instructionally useful, "hands on" form on school property or within walking distance. It's all there, just a matter of going to where it is and staring at it until familiarity's veil lifts and it becomes strange enough to see.

Study of immediate reality does something else of vital importance in learning—it triggers emotion. Love it or hate it, a kid's "right-here, right-now" *matters*. And because it matters, it's unfailingly, indisputably relevant.

Third, the brain copes poorly with poorly organized information, which is what school subjects give it—information at odds with how the brain perceives reality, at odds with how sense is made of it, at odds with reality's holistic, systemic nature.

In the real world—the world that schooling is supposed to explain and explore—everything connects to everything. In the real world, politics, climate, economies, laws, transport, literature, health, belief systems, weapons, weather, humor, religion, technology, entertainment, and so on and on and on, swirl together in dynamic, continuously changing, evolving, mind-boggling complexity.

The traditional core curriculum suffers from the problem pointed out by the ancient story of blind men examining an elephant. It pulls complexity apart and studies the

parts as if they had little or nothing to do with each other. Separate-subject instruction sends kids on their way inadequately prepared for life, and it's sending America on its way seriously crippled by an inability to anticipate the consequences of technological change, policy initiatives, ideologies, and unexamined cultural assumptions.

A fix

Systems theory solves the information-organizing problem, and does so in a way easily understood by adolescents. It doesn't do away with school subjects, just makes them working parts of a much simpler "master information organizer"—the organizer they began using when they were born and continue to use non-stop. When kids understand how their minds sort, store, retrieve, integrate, and relate information, they know how to create knowledge—sometimes even wisdom. In a dynamic, evolving world facing an unknown but obviously very dangerous future, no other ability comes even close to that in importance.

Operationalizing the fix

The decision in the late 19th Century to adopt the core curriculum has created a profession made up of specialists ill-equipped and disinclined to work together on the whole of which their specializations are parts. What the profession needs is what systems theory can give it—a shared, comprehensive, coherent conceptual framework for thinking about reality on a general level, and a vocabulary for talking about it.

Problems, Einstein said, can't be solved using the same kind of thinking that created them. Knowing that teachers will at first need a little help devising and making use of systems-based lessons, we wrote an illustrative, multidisciplinary course of study for kids and teachers titled *Connections: Investigating Reality*. Experimentation tells us it should be used the first year of secondary-level schooling, before kids are programmed to assume that school subjects are the best or even the only way to organize knowledge.

A first of its kind, *Connections* is far from polished, so in the spirit of open-source, we give it away, along with provision for users to connect electronically and work together to improve its active-learning activities.

We had intended to leave it at that and get on with our retirements, but inserting a new course into a massive, rigid bureaucracy proving all but impossible, we decided to use material left over from a project we'd done for Prentice-Hall, Inc., to write a course less likely to meet resistance. We put *Investigating American History: A Systems Approach*, online alongside *Connections*, and invited criticism and suggestions for improvement.

This spring we got an e-mail from a young teacher in western Argentina, Ignacio Carrel. He'd translated some of the American history material into Spanish and, notwithstanding his students' unfamiliarity with the content, he said his hard-to-teach alternative school students were suddenly easy to teach. So convinced was he of the

effectiveness of systems theory as an information organizer, he was using it to write an ancient history course.

Howard, willing to help, began building and expanding on what Ignacio had done. The project, *World History: A Systems Approach*, is underway. It's not yet complete, but is far enough along to allow its use and invite feedback for improvement. Like Connections and the American history course, it's free for the downloading.

Classroom teachers collaborating—not commercial publishers, not special interest groups, not corporations, not federal or state departments of education, not Congress, state legislatures, foundations, or think tanks—should be writing curricula. No one else is better positioned. The fact that about 650 items a week are downloaded from our website (without a dime's worth of advertising and despite our relative anonymity) says teachers are talking to other teachers.

We're convinced that systems theory is the key to creating a general education curriculum free of the core curriculum's major problems. And we're dead certain—based on extensive classroom experimentation—that helping kids lift into consciousness and use their already-known systemically integrated information organizer moves them, in just a few weeks, to performance levels not otherwise possible.

Bonuses of educator-led change: Taxpayers save billions on the cost of textbooks and tests. Textbook publishers and test manufacturers stop being the tail wagging the curriculum dog. Business leaders and politicians finally have to accept that learning—real, mind-changing learning—has almost nothing in common with manufacturing and marketing. If kids' minds function as well as they can and should, it might even be possible for America to survive its superficial commitment to educating.

The present multi-million dollar push to close the achievement gap has focused on what teachers do. What matters far more is what kids do. If we'll give them what they want—genuine intellectual stimulation—America's schools will eventually dazzle the world.

We'll know we're on the right track when it becomes obvious that what's going on in kids' heads is far too idiosyncratic, too multi-faceted, too complex, too important, too wonderful, to be evaluated by ACT, SAT, the NAEP, or any standardized test.

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1. A quick summary of [fundamental problems with the core curriculum](#).
2. A [multidisciplinary course of study](#) for middle and high school levels introducing teachers and learners to systems-based learning.
3. *Investigating World History: A Systems Approach*. (The course uses many color photographs as elements of investigations, so to keep file sizes reasonable, each unit is downloaded separately.) The first is “1: Paleoanthropology” which downloads at

<http://www.marionbrady.com/WorldHistory.asp>. All units completed to date are at that link.

4. *Investigating American History: A Systems Approach*.

<http://www.marionbrady.com/AHH.asp>.

5. A small book explaining how we got where we are in education, and how systems theory can take us where we need to go:

<http://www.marionbrady.com/documents/WWL.pdf>.