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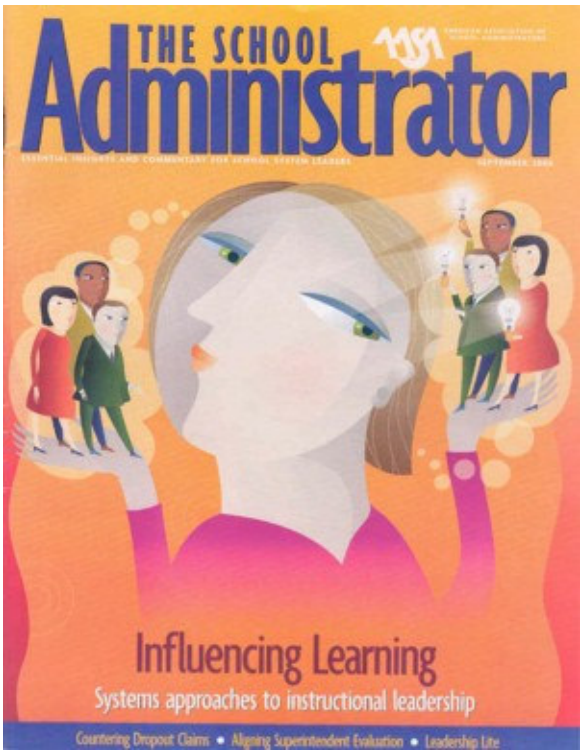
# Bucking Conventional Wisdom

By Marion Brady

If H. G. Wells was right, educational leaders are the most important decision makers on the planet. "History," he said, is "a race between education and catastrophe." And most people agree.

Why then do community members defeat school bond levies, resent school taxes, inundate newspaper op-ed pages with complaints, demand an aggressive superintendent's head and resist new policies and practices that are designed to strengthen the institution?

I'm convinced it's because the public senses something fundamental is wrong. They can't put their finger on the problem, can't find the words to articulate their feelings, don't know exactly what real quality education looks like. But they'd know it if they saw it. If they saw it they'd support it. But they're just not seeing it.




Few people share my view. The conventional wisdom is that most schools—certainly those that serve better-off populations—are pretty good and if all could be brought up to that good level, America would be in great shape. My disagreement with the conventional wisdom is based in part on my reading of W. Edwards Deming and Joseph Juran. They're the two management experts given most of the credit for making the quality of Japanese manufactured goods world class.

Yes, I know about the Malcolm Baldrige National Quality Awards based on their work. Yes, I know there are schools that have earned that award. Yes, I've read those schools' award application summaries. I'm impressed—in awe, even—of the work required to win the award. Notwithstanding all that, I stick with my contention: Even the best of America's best aren't quality schools.

The education reform movement set in motion in the late 1980s and still in place is pushing real quality ever farther away. Deming and Juran argued that poor performance indicated an unaddressed system problem. Rejecting their contention, Goals 2000 and No Child Left Behind assume instead that "the system" is basically sound. They blame poor performance

on the people in the system and use the news media to subject educators and students to annual barrages of counterproductive public shaming.

Defenders of the current thrust of reform say those who oppose it should stop making excuses, stop whimpering about standards and accountability and get to work to close the achievement gap. Yet doing with greater diligence what we've done for the past 100 years simply accelerates our progress toward catastrophe.

**What's Wrong?**

Those who live by busy railroad tracks don't hear the trains. It's only when the refrigerator clicks off that we're aware it had been running. The really familiar lies below our usual threshold of awareness.

Our education system is certainly familiar. Just about everybody has experienced it firsthand and at length. If, as I'm arguing, our schools aren't quality operations and if, as Deming and Juran argued, poor quality means there's an unaddressed system problem, what is that problem? What part of the massive, complex institution of public education are we failing to examine because its ubiquitousness has made it part of the woodwork? What system component needs to be hauled up into consciousness and inspected with fresh eyes?

The curriculum. The curriculum that's been in place since 1892. The curriculum that unexamined personal experience has convinced us is "how it's supposed to be." The curriculum whose validity every current major reform effort fails to question, choosing instead to pursue it with greater rigor or to play with class size, school size, length of day, length of year, variable staffing, shared decision making, looping, grouping, flexible scheduling, technology, merit pay, vouchers, charters, choice, business partnerships, parent partnerships, privatization and testing.

The curriculum, what's taught and what's learned, is what the whole institution is supposed to be all about and it's largely ignored, treated as if it made no difference. The "basic skills" focus of the earliest years of instruction is probably proper and sound. Problems begin after that, somewhere around 4th grade, when content becomes a major factor in the instructional picture.

►*Problem 1: Aimlessness*

Deming insisted that to succeed, an organization needs a clear, overarching aim that everyone in the organization thoroughly understands and accepts. Ask educators to state the aim of American education and it soon becomes clear that the institution doesn't have one. Is it to introduce the core disciplines? Improve student problem-solving skills? Keep the United States economically competitive? Raise standardized test scores? Prepare students for democratic citizenship? Instill a love of learning? Prepare students for useful work?

How is it possible to evaluate the performance or the progress of a system that doesn't know what it's supposed to be doing?

►*Problem 2: Lack of Organization*

The operant theory of teaching in America's schools has long been "If you throw enough mud on the wall, at least some of it is bound to stick." That theory yields an adult population that

not only has forgotten most of what it once learned, it considers the loss inevitable and acceptable.

To store, retrieve, integrate and create information efficiently, the brain requires that everything known be part of a single, organized structure of knowledge, every part of which is retrievable via logic rather than memory. The traditional curriculum ignores that requirement.

►*Problem 3: Neglected Content*

Knowledge expands exponentially. Much (maybe even most) of that expansion is in and between fields of study not included in the traditional curriculum. For example, there is no formal place for the study of the cultural assumptions that underlie differing societal patterns of behavior—assumptions shaping governments, economies, social institutions and the course of history. There's no place for the study of the dynamics of change. There's no place even for teaching the myriad mundane skills underlying routine daily functioning.

A curriculum without built-in mechanisms for evaluating and adapting content to evolving reality invites disaster.

►*Problem 4: Fragmented Knowledge*

Alfred North Whitehead, in his 1916 Presidential Address to the Mathematical Association of England, said it was critically important to "eradicate the fatal disconnection of subjects which kills the vitality of the modem curriculum."

Arnold Thackray is quoted in *The Chronicle of Higher Education* in October 1987 saying, "The world of our experience does not come to us in the pieces we have been carving out."

In *A Place Called School*, John I. Goodlad's book summarizing his massive study of American high schools, the author writes: "The division into subjects and periods encourages a segmented rather than an integrated view of knowledge. Consequently, what students are asked to relate to in schooling becomes increasingly artificial, cut off from the human experiences subject matter is supposed to reflect."

Dozens of similar quotes from nationally and internationally known scholars could be cited, but policymakers, convinced that quality lies in doing more diligently what we've always done, aren't listening. Knowledge is seamless, systemically integrated and mutually supportive. But nothing in the traditional curriculum even hints of that fact. Indeed, as a glance at college catalogs over the years makes clear, the trend is toward greater fragmentation and incoherence.

►*Problem 5: Fuzzy Priorities*

Is it more important to know how to compute square root or how to avoid getting fat? Is it more important to know who discovered America or who controls the local media outlets? Is it more important to know why sound travels faster through water than through air, or why the world's deserts are expanding?

What could be taught is incomprehensibly vast; what can reasonably be taught in the limited time available for formal instruction is extremely limited. Who decides what's important? Using what criteria? Who should decide and why? We don't even talk about such questions, much less attempt to address them.

►*Problem 6: Irrelevant Content*

Whitehead, in his speech, talked about the harm done by teaching "inert ideas." He insisted an education that wasn't useful was a waste and said "useful" meant useful here and now. Literally.

To the questions in the back of students' minds and occasionally asked, "Why is this important?" the too-frequent responses are "Because you'll need it next year" or "Because it'll be on the test." Those are wasted words, attached to instruction that's a waste of time. The alternative to a practical, immediately useful curriculum is an impractical, useless one.

►*Problem 7: Too Simplistic*

It's been more than a half century since Benjamin Bloom and others prodded at least some educators to rethink the claim they were teaching students to think. Exam questions requiring students merely to recall something read in a book, heard in a lecture or even clarified in class discussion aren't "thought questions," and requiring responses in essay form doesn't make them so.

Enhancing student ability to engage in higher-order thought processes isn't a high priority in the current reform effort. Washington think tanks, the Business Roundtable and others who devised the education reform strategies now in place share the view that educating is primarily a matter of distributing information. The traditional curriculum encourages that simplistic view.

Rare or perhaps non-existent is the school where there's a continuous, coordinated, systematic plan to ensure kids actually think—routinely classify, infer, hypothesize, generalize, synthesize, value and so on. Far more often than not, what's "distributed" to the student is much akin to a crossword puzzle with all the blanks filled in—information already milked of intellectual challenge, requiring only that it be memorized.

►*Problem 8: Overemphasis on Symbols*

Somehow the fact that reading is one way to learn has morphed into the belief that it's the only way to learn. That, in turn, leads to the assumption that reading ability is an indicator of general intelligence.

The waste of human potential from this assumption and its emotional and monetary costs as it manifests itself in grade retention and stereotyping, as it squeezes out other curricular components and as it cuts off exploration and use of the brain's vast ability to learn in other ways are incalculable. Not the least of the problems caused by equating ability to manipulate symbols with general intelligence is its contribution to the performance gap between the children of America's "haves" and "have-nots." The have-nots, doing less well on symbol manipulation tests, are considered less smart. The phenomenon of the self-fulfilling prophecy then takes over, perpetuating the performance gap.

►*Problem 9: Fear*

"Drive out fear," Deming said.

Drive fear out of American education and the institution would fall apart. Take away the fear of poor grades, of teacher or parent disapproval, of the attendance officer, of bad press, of grade retention, of withheld certificates and diplomas, of lost job opportunities and so on, and

there wouldn't be enough left to deserve the label of public education. Fear is the duct tape holding the .institution together.

There is, however, a part of the institution where fear doesn't exist. It isn't fear that brings students out on their own time to suit up for football, basketball or track, to join performing music ensembles, to create art for exhibitions, to volunteer to master and maintain school technology and to organize to do good.

There's surely a powerful message here. It's human nature to be curious, to want to know, to explore, to discover, to learn. Satisfying that nature is its own reward and substituting extrinsic motivators for inherent satisfaction is a game with proven long-range negative consequences. Dropouts, walkouts, discipline problems, boredom and disengagement are powerful indicators of a dysfunctional curriculum.

►*Problem 10: Too Much Stuff*

Trying to get an idea across in one of my newspaper columns, I visited a local middle school and asked to borrow copies of the 8th grade textbooks for the four core areas: math, science, social studies and language arts. Their combined weight prompted me to work at the counter rather than carry the books across the parking lot to my car. One thousand four-hundred and sixty! That's how many concepts the authors of the four textbooks thought were important enough to include in the books' glossaries, including such concepts such as "amniotic," "laissez-faire," "peristalsis," "hyperbole" and "heterozygous."

Think about that! Start with 180 days, subtract a few for testing and other bureaucratic demands, divide the number into 1,460, and it means dumping on adolescents an average of eight or nine new ideas every day! The assumption that something of intellectual consequence can emerge from a curriculum pumping information out at firehose velocity is absurd.

**Attacking Problems**

To these 10 problems, I might add a few others. The curricular status quo gives educators from different specializations no shared vocabulary for talking about the content of instruction. It perpetuates the ridiculous notion that it's possible to "cover the material," reinforces student passivity, ignores the centrality of information synthesis in expanding understanding and fostering creativity, supports the fiction that machine-scored standardized tests can evaluate and attach meaningful numbers to higher order thought processes, doesn't address ethical and moral issues, takes little or no advantage of the mutually supportive nature of knowledge, lacks mechanisms for adapting to social change, and solidly blocks exploitation of what is surely the key to human survival: human variability.

Anyone of these problems is serious enough to warrant calling a national conference, but any strategy that attempts to address them individually will fail. The problems are all products of a process social scientists call "institutionalization."

Over the years, school subjects have taken on lives of their own that are little related to their original purpose, which was simply to explore and explain various aspects of experience. Means have become ends. Quadratic equations are solved, sentences diagramed, dates learned, the number of natural elements memorized not because students thereby make more sense of experience, but because this is what schools do. Unexamined and driven by inertia, the

curriculum moves inexorably from relevance to ritual. Novel methodologies, such as projects, may relieve the tedium, but underlying assumptions about the organization and expansion of knowledge remain unchanged.

Sadly, the current thrust of reform reinforces the process of institutionalization. The curriculum, it's assumed, is sound. Poor performance then must be due to laziness or incompetence. So fingers are pointed. Screws tightened. Bars raised. Frills eliminated. Rigor demanded. Controls imposed. Standards elaborated. Testing programs expanded. Rewards and penalties increased. And after a brief, test-focused improvement spurt, performance levels off or gets worse.

The diagnosis is wrong, so the cure is wrong. A dysfunctional curriculum pursued with greater diligence simply accelerates deterioration. We're headed down a dead-end road.

What American education needs but doesn't have is a clear, concrete, no-nonsense institutional purpose and instructional strategies geared to that purpose.

**Making Sense**

I offer such a purpose for consideration: The primary aim of a general education is to expand student ability to make sense of experience.

And I offer a means to that end: The basic tools for sense making are familiar to everyone. Attempting to understand experience, we pull from it something to think about. We then locate that "something" in an environment, assign it time dimensions, identify the participating actors or objects, describe the action and hypothesize cause. Systemic relationships between the five make the experience coherent.

Effective functioning requires mental organization. The brain's five-element "superdiscipline," not the familiar school subjects and courses, is the basic organizer of thought. All students show up for kindergarten already making routine, sophisticated (albeit unconscious) use of this built-in system to perceive, select, organize, store, integrate, create and manipulate information.

The single most important thing formal instruction can do is help them move the system into consciousness, devise and elaborate sub- and sub-sub-category systems for each of its five elements, continuously refine it by bringing it to bear on experience and use it to explore systemic relationships between its elements and the reality the five elements model.

This isn't new content in the usual sense of the word. It's the process all of us already use every day. Helping the young surface, clarify, refine and make formal, deliberate use of their basic sense-making process moves them from "knowing" to "knowing what they know," with far-reaching intellectual and philosophical consequences. Every academic discipline, every school subject, every teacher's favorite lesson and every student's most mundane experience can be used to surface and elaborate this intuitive system, but the emphasis changes from covering the content to using it as a vehicle for illustrating and elaborating the sense-making process.

**What Now?**

Engineering significant change in education, someone has pointed out, is like trying to move an elephant made of Jell-O. America's schools are bureaucracies within bureaucracies within bureaucracies. Educators are preoccupied with their narrow fields, trying to do better what's always been done and are ill-prepared to think about the whole of which their efforts are parts. Ideologues and special interests have sold—and the public has largely bought—the naive assumption that bringing market forces to bear will cure all educational ills. Politics has been stirred into the mix, and policies sold with high-sounding educational rhetoric and bumper-sticker slogans often work behind the scenes to someone's advantage in ways having nothing at all to do with educational quality.

If helping students use their natural way of organizing knowledge required dumping and tradition, the effort would be a waste of time. Fortunately, that isn't necessary. Making the expansion of sense-making American education's overarching aim and pursuing that aim by helping students surface and understand the sense-making process require no bureaucratic shake-up, no changes in schedules or staffing, no increased budget, no changes in course titles, no changes in grade cards. It merely requires broadening teacher understanding of the task. .

The jigsaw puzzle is a useful metaphor. Studying the picture on the lid of the box doesn't change the puzzle pieces, it just makes them make more sense. Teachers need to see the whole of which their specializations are parts, and they need to be encouraged to do so by appropriate, formally adopted standards keyed not to school subjects but to student sense-making skills and abilities.

We've hitched our future to a fundamentally flawed curriculum designed more than a century ago for a tiny number of privileged students likely to go to college. No Child Left Behind and parallel state efforts are well along toward freezing a reactionary, innovation-averse, one-size-for-everybody curriculum in permanent place. Traditionalists, frustrated by the lack of significant progress from a decade and a half of effort and still blaming people rather than the system, are beginning to clamor for a national curriculum, national standards, national measures of accountability.

Wrong diagnosis. Wrong cure. Doing with greater diligence what we've been doing for the last hundred years doesn't just invite catastrophe, it assures it. If we continue our present course, perhaps we can take comfort in Deming's observation that, "It is not necessary to change. Survival is not mandatory."

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