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What Bill Gates Doesn't Understand About Education

By Marion Brady

Mr. Gates:

Walking past the TV in the kitchen several weeks ago, I caught enough of your [May 4 appearance](#) on CNBC to hear you say that of all the Gates Foundation's work, education was the most difficult, the most resistant to change.

I share your frustration. Over the last hundred or so years, the rate of progress in medicine, engineering and other fields has been nothing short of phenomenal, while education doesn't look much different than it did when my parents enrolled me in kindergarten in the fall of 1932.

There are a lot of reasons for poor academic performance. I'd like to think you don't share the myth that good teachers can cancel out the negative effects of poor prenatal care, early language deprivation, family instability, unaddressed sight and hearing problems, chronic hunger, mercury and lead ingestion, psychological stress, limited personal experience, and so on. I'd also like to think you don't assume that merely "raising the bar" via tougher subject-matter standards and high-stakes tests will unleash previously neglected learner potential.

But your small schools initiative, teacher research and push for the Common Core State Standards suggest you think (or at least hope) that in the drive to improve learner performance, "one particular thing" could be done that would make a real difference in the quality of American education.

I believe there is something that could be done— one thing, among others, that could make a radical difference where it matters most: in kids' heads. The idea came to me in 1964, not long after I was recruited by Florida State University to teach in their school of education. I'll get to the idea in a moment.

The 1960s were an exciting time for those in education. Fears that Russia was out-educating America in science and technology loosened government purse strings. Federally financed [regional education laboratories](#) were created to promote education research and development. University faculties designed all kinds of new teaching programs and hands-on instructional materials for elementary and secondary schools, and commercial publishers marketed them. Enough fresh thinking emerged to propel the institution far into the future.

And then it stopped. Dead. We reformers had screwed up. Teachers hadn't been trained to use the new materials and methods. Administrators hadn't been brought along, so

they weren't supportive. Parents weren't happy about unfamiliar-looking homework. Activity-based textbooks (two of which my brother and I had written for Prentice-Hall, Inc.) didn't sell well. Conspiracy theorists thought reformers were socialists or communists, and said so loudly. School board members got nervous. The education pendulum swung from the future to the past. Hard.

I learned from that experience. Now, trying to move the institution, I work bottom up, an effort, incidentally, made much harder by the "standards and accountability" reforms you've spent several billions promoting. (Few teachers are free to step off the approved Common Core State Standards path.) Notwithstanding that handicap, the instructional activities and supporting materials my brother and I write and give away are being downloaded from my [website](#) at an average 650 items per week.

But about that concern you and I share—decades of near-flat institutional performance. You think it's primarily a people problem—too many teachers aren't up to the challenge, and too many kids lack the self-discipline necessary to do what's expected of them.

Your cure: For the institution, competition via market forces—vouchers, charters, school grading, rewards, penalties, school closings, and other privatizing strategies. For teachers, advice in the form of conclusions from the research you've funded about what makes a teacher effective. For kids, rigor or grit, primarily in the form of preparation for standardized tests that officials deliberately make harder and harder because they blame poor performance on the "soft bigotry of low expectations."

I'm impressed by your willingness to put major money where your mouth is, but I think you've misdiagnosed the problem. I say flat performance isn't a people problem, it's a system problem — and that system is the core curriculum adopted in 1893. Since you picked up much of the tab for reinforcing that curriculum with the Common Core State Standards, you obviously take its adequacy for granted.

Decades of classroom experience tell me that's a mistake. The curriculum that shapes the education of just about everyone suffers from many serious problems. Let me try to explain one—one that back in the '60s many of us realized was critically important but now is ignored.

An analogy may help. Think of kids' memories as phone books, and the entries as information. For the book to work well, the entries need a) to include every name that might be called; and b) be accurate.

No argument there, right? It's what educators have always tried to do—cover the material, and get it right. But a half-century ago we concluded that wasn't enough. The learner's "phone book" could list every name and number, and be absolutely accurate, but if the name appeared in random rather than alphabetical order, the book would be all but useless.

To be learned, really learned, what's taught needs to be a) comprehensive; b) accurate; and c) ORGANIZED — not just in its presentation, but also in kids' heads.

Most of what's being taught today isn't really being learned. Failure to make it part of what educators call a "structure or framework" of organized knowledge sends it to kids' short-term memory, and as soon as the testing crisis has passed, they dump it.

Unorganized or disorganized knowledge is just one of at least a dozen really [fundamental problems](#) with the 1893 curriculum that's still in near-universal use. I'm not minimizing the effect on learner performance of any other factor to which others have called attention; I'm just saying that millions of kids and teachers are taking heat for something over which they have no control: a seriously flawed curriculum.

If I'm coming across as some wild-eyed ivory tower sort, I have quotes from Leonardo da Vinci, Rene Descartes, Alfred North Whitehead, Felix Frankfurter, Buckminster Fuller, Albert Einstein, and dozens of other respected scholars living and dead who have said exactly what I'm saying about the uselessness of disconnected knowledge.

There's a solution, though, one that can keep familiar school subjects in place but make them parts of an acceptable general education curriculum. That solution is [General Systems Theory](#). Figuring out how to use it to improve educating is what some of us were doing when you and other leaders of business and industry shoved us aside, took control of American education and professed that the key to quality was simply trying harder.

Mr. Gates, you swing a lot of weight in political circles. If you told policymakers that the current thrust of reform was blocking alternative ways of improving learner performance, and educators should have enough autonomy to explore those alternatives, those of us who have been working on them for decades might have a chance to show what's possible.

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