

Does Six Sigma Belong in Sixth Grade?

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Culture & Change
by Art Kleiner

Does Six Sigma Belong in Sixth Grade?

For business/school partnerships to work, companies have to listen, as well as teach.

For several years now, a little piece of corporate jargon has lingered in my mind: “the 91 percent.” I first heard it in mid-1996, on a visit to the Motorola Corporation. Ed Bales, then the director of the company’s groundbreaking, multimillion-dollar, decade-long program for improving the quality of public schools, was talking about his frustration. During the previous decade, Motorola’s executives had invested at least \$1 million per year in grants to teachers, consultations to schools near their plants and offices, and training programs for teachers — because they felt they had a supplier problem. The graduates they recruited from public schools (and even universities) didn’t have enough skills to handle Motorola’s jobs. It was very expensive to train them, and after looking at the future of public education, they believed things would only get worse unless companies like Motorola stepped in proactively.

But they had gradually come to realize that “changing the schools” would be much tougher than expected. Teachers didn’t want to hear from companies about new teaching meth-

ods; parents wanted schools to remain the way they remembered them from their youths; and most school reform efforts didn’t seem to improve student performance very visibly. “So we’ve decided,” Mr. Bales said, “to go after the 91 percent.” He used the phrase so matter-of-factly that it didn’t occur to me, at first, to ask him what it meant. But, finally, I did. “Ah,” he said. “Only 9 percent of a child’s time, up to age 18, is spent in school. If we knew how to affect the other 91 percent, including the time they’re playing and asleep, and especially their preschool time — then we could really make some progress.”

This was in the heady days before Motorola’s late-’90s slump, and I came away impressed, and a little disturbed, by the company’s hubris. “Research shows,” said the company’s initial report to employees on its “education-reconstruction” project, “that lifelong learning can be initiated at birth.” Did these managers really think they had so much power and savoir faire that they could establish a beachhead on children’s earliest years? It wasn’t until recently that I realized that they weren’t so much arrogant as desperate. They needed to find some leverage on the upcoming work force, and they would go wherever they

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Educators may have more to offer businesses than businesses can offer them. That's because they care about teaching.

could see an opening.

And they are hardly alone. The idea that companies must step in to change the schools has taken on startling currency during the past few years. Hundreds of companies have started initiatives to help reform the public schools in their home communities, and (in many cases) to “help them act more like businesses.” McDonald's creates curricula for Martin Luther King Day; Toyota funds inner-city literacy efforts (aiming, like Motorola, at preschool and parent training); BellSouth sponsors in-school weather stations; Exxon Mobil, with butter not melting in its collective mouth, writes ecology lesson plans; British Telecom offers teachers awards for improving reading; John Deere finances a project to train

children to be energy auditors; Textron and Arthur Andersen start pilot schools (in Providence, R.I., and Alameda, Calif., respectively); and Microsoft and Intel set up massive, multimillion-dollar training programs for teachers to learn how to use — well, Microsoft software on Intel-driven computers.

Most press attention has gone to blatantly self-serving projects by such people as Channel One entrepreneur Christopher Whittle and investment mogul Theodore J. Forstmann, who are leaping to build new kinds of private schools for what they see as a mainstream market. (“What do you think is harder? Making jet engines or teaching kids reading, writing, and arithmetic?” Mr. Forstmann asked a *New York Times* reporter rhetorically

in January, after he had turned around Gulfstream Aerospace Corporation and then sold it to the General Dynamics Corporation.) But the straightforward industry–education partnerships are more interesting, to my mind, because they reveal the hidden stresses that our boom economy has placed both on the labor force and on mainstream corporate culture.

First of all, the real problem is not quite as the press or the businesspeople have defined it. Yes, most schools today are inadequate, but their quality, by any objective standard, has not declined. Indeed, both in the U.S. and around the industrialized world, schools are, if not better, at least no worse at teaching basic skills than they have always been.

The modern school, with its grade levels and strictly timed periods, was invented in the late 19th century as a way of bringing order to the newly evolving industrial cities, and to prepare children for the emerging factories. Schools have struggled ever since to somehow reconcile their mass-production heritage with the person-to-person colloquy and care that lies at the heart of all successful teaching. And throughout the past 125 years or so, the 7th- and 8th-grade reading level of most high

school graduates was good enough for most jobs — from Mark Twain's Connecticut Yankee through H.L. Mencken's booboisie through Ralph Kramden and Ed Norton to the era of Roseanne.

Today, however, the bar has been raised. Assembly-line workers in companies like Motorola need statistics (for their Six Sigma quality control approach), a 12th-grade reading level (for complex machine instructions and upgrades), a basic background in physics, a little programming, and possibly a foreign language (to communicate with their counterparts in, say, Brazil or Taiwan). Any high school graduate so well-educated, these days, is probably going on for an engineering degree, or else straight to a dot-com. In an era of what looks to be persistent shortages of skilled labor, schools are blamed, traumatized, and struggling to cope. Anything that reclaims more disadvantaged and uneducated youth for the economic mainstream represents a survival strategy for corporations that need more and more, not fewer and fewer, skilled workers.

With a crisis at hand, why is progress so difficult? As in most alliances, it comes down to culture. I saw this firsthand last year, when I joined the editorial staff of a book called *Schools That Learn*, one of a series of "Fifth Discipline Fieldbooks" on organizational learning (due out in August from Doubleday). Half the authors were business consultants, and the other half were educators; and even though we got to know each other well, we kept getting tripped up by our startlingly different attitudes about the world.

To most businesspeople, for instance, profit is not just a way of making money, but the most honorable part of the game; without it,

there could be no hedge against risk. To educators, profit is sheer exploitation, and it poisons community values. Recently an educator told me that she would cheerfully toss out capitalism and go back to a feudal economic structure, "where at least the lord of the manor made sure everyone was taken care of."

Similarly, to businesspeople, promoting ethnic and gender diversity is an option that you take to make the workplace more interesting, to reach customers more effectively, or to forestall legal action and criticism. But to teachers, there is no choice about diversity. Some love it and some hate it, but all recognize that schools today are microcosms of the whole population, with children from increasingly wider groups of ethnic, religious, cultural, economic, and family backgrounds. (Incidentally, that's why Mr. Forstmann will find teaching is much tougher than making jet engines; today's children simply can't be dealt with effectively in a standardized fashion.) Factor in attitudes about teachers' unions (which business managers viscerally detest, but educators see as their most reliable champions) and the near-universal low status of most education schools on college campuses (including most business-

people's alma maters), and you have a fascinating ongoing culture clash that never fails to breed new misunderstandings.

Most of this, of course, takes place below the surface, and neither the businesspeople nor the educators are eager to talk about it. Instead, the businesspeople come in with plans to make the schools more "accountable," or with lesson plans written by their engineers, and assume that the desperate, impoverished educators will be eager and grateful for the help. As Jim Evers (a New York-based business and education consultant and retired schoolteacher) put it, the teachers "think there's a hidden agenda. They always suspect the business is trying to hustle a business contract out of the school, to micromanage the school, or to prove that they're incompetent. Or, they think the executive is trying get some community service on his resume, so he can move up the ladder at work."

Ironically, the corporate people tend to suspect the educators of exactly the same kind of careerism and knee-jerk command-and-control motivation. "We had already learned at Motorola that we can't be bureaucratic micromanagers anymore," said Ed Bales when I called him recently

for an update. (He's retired from Motorola, but remains as an ongoing consultant with the schools partnership.) "Yet schools are full of bureaucratic micromanagers, who get in the way of change."

If the stakes weren't so high, I'm sure that both sides in most business-education partnerships would long ago have given up. But, fortunately, there are some ways to create effective results. *Schools That Learn* researcher/writer Janet Coleman, who looked into more than a dozen successful partnerships for us, says that the common thread is humility — starting unilaterally on the business side. It has to make the first gesture of giving in, partly because it is perceived (by both sides) as having more power and partly because, paradoxically, it is better trained, these days, in the practices of operating as a coherent team.

The successful efforts start with talk, not between the CEO and superintendent, but in a group of, say, teachers and engineers. The critical question is: What kind of change will show that we're successful? Because of the recent adoption of rigorous standardized tests in most states, it's easy to say, "We'll know we're successful if we get a 25 percent boost in scores." But

that's where I give Motorola, and a few other companies, credit: They're looking for increases not just in recall and recognition of random facts, but in problem-solving and team-building — the kinds of skills that an autonomous team member needs on the factory floor.

From there, the successful partnerships eschew all the traditional trappings — a canned curriculum, a set of presentations, a Web site, a financial gift, or computers. Instead of invading the school with a company's products or people, they open up the company, and its people, to the schools. Teachers and students are invited into the company's way of thinking — not as occasional visitors, but as regular guests. This doesn't mean, necessarily, a set of "school-to-work" field trips. It means teachers and engineers sitting down together to develop relevant lessons that bridge the gap between, say, the math the students are struggling to learn, void of any relevant context, and the math that an operator in an electronics plant must know. Motorola opens its doors this way to hundreds of children in summer-school programs each year. "We designed it together with the teachers we've met," Mr. Bales says. "We taught them about

collaboration, and they taught us how to design an open environment that sets kids up to conduct their own experiments and figure out problems using the technology."

Operating with humility and stealth is not an easy transition for many companies, particularly in arenas like education partnerships, which are typically handled by someone from public relations who wants the company's work trumpeted as loudly as possible. But it may be a very valuable skill to learn. The alternative is what Mr. Forstmann is trying: taking over the schools. But business won't succeed at that endeavor — not because its ideas are bad, but because it doesn't care about teaching. Teaching can't be effective when done for results; it has to be done for its own intrinsic joy. In fact, in the end, educators probably have more to offer businesses than businesses have to offer them. The educators (at least the good ones) know how to create an environment in which people learn. That turns out to be a remarkably valuable set of insights for companies in the coming era, where it's not just skilled people who are scarce, but also the ability to get an edge. +

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