In 1983, a presidential commission issued the landmark report "A Nation at Risk: The Imperative for Educational Reform." The report warned that despite an increase in spending, the public education system was at risk of failure. "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today," the report declared, "we might well have viewed it as an act of war."

New York City Schools Chancellor Joel Klein often quotes the commission before discussing how U.S. schools have fared since it issued its report. Despite nearly doubling per capita spending on education over the past few decades, American 15-year olds fared dismally in standardized math tests given in 2000, placing 18th out of 27 member countries in the Organization for Economic Co-operation and Development. Six years later, the U.S. had slipped to 25th out of 30. If we’ve been fighting against mediocrity in education since 1983, it's been a losing battle.

What could turn things around? At a recent event that I organized at the Columbia Business School, Klein opened with his harsh assessment of the situation, and researchers offered some stark options for getting American education back on track. We could find drastically better ways of training teachers or improve our hiring practices so we're bringing aboard better teachers in the first place. Barring these improvements, the only option left is firing low-performing teachers—who have traditionally had lifetime tenure—en masse.

The emphasis on better teachers—through training, selection, or dismissal—comes from the very consistent finding that improving faculty is one of the best, most reliable ways to improve schools. If the person standing at the front of the classroom has raised...
the test scores of students he's taught before, he's likely to do so again.

But how do you get good teachers in the classroom? Unfortunately, it turns out that most evidence points toward great instructors being born, not made. National board certification may help a bit, a master's degree in education not at all. It's also difficult to pick out the best teachers based on a résumé or even a sample lesson. It takes a year or so before evaluators (and even teachers themselves) know who is really good at getting kids to learn, and few qualifications are at all correlated with teaching ability. Candidates with degrees from prestigious colleges—the type where Teach for America does much of its recruiting—do a bit better, but not much.

The only option left on the table is getting rid of bad teachers once they're already teaching—perhaps by firing low-performing instructors after a probationary period of a couple of years. How many teachers would school reformers have to fire in order to get American schools performing at their best? That's the question researchers Doug Staiger and Jonah Rockoff set out to answer in a study they presented at the Columbia conference.

The researchers went through a simulation exercise, building on prior findings about the impact that great teachers have on their students, the fraction of incoming teachers who turn out to be strong performers in the classroom, and the "signal-to-noise" ratio in a teacher's performance during her first couple of years (i.e., how hard it is to tell whether a teacher is bad or just unlucky).

When they ran the numbers, the answer their computer spat out had them reviewing their work looking for programming errors. The optimal rate of firing produced by the simulation simply seemed too high: Maximizing teacher performance required that 80 percent of new teachers be fired after two years' probation.

After checking and rechecking their analyses, Staiger and Rockoff came to understand why a thick stack of pink slips are needed to improve schools.
There are enormous costs to having mediocre teachers burdening the school system, and once they get their union cards, we're stuck with them for decades. The benefits of keeping only the superstars is enormous, such that it's better to risk accidentally losing some of the good ones than to have deadwood sticking around forever.

Is an 80 percent dismissal rate practical? One issue is whether there would be enough new recruits to replace all the teachers you'd be firing. Teach for America has been able to fill its ranks with Ivy League graduates year after year, so we know there are lots of college grads who are willing to devote at least a couple of years of their lives to teaching, and 63 percent of TFA alumni remain in the field of education afterward. If the teaching profession gains greater status and prestige, perhaps many more would choose teaching as a career rather than moving on to more lucrative jobs at Goldman Sachs or McKinsey. And in 1997, the L.A. school system was able to triple its rate of hiring, bringing in additional recruits with no discernible decline in the quality of those hired. Then again, while TFA and the L.A. Department of Education may have a steady supply of applicants, that doesn't much help schools in small-town America, where recruitment is more of a challenge.

And, of course, another issue is politics. It's hard to reconcile an 80 percent dismissal rate with the existence of teachers' unions: Pushback from unions and the government leaders who rely on their support have largely managed to prevent any breach of teacher job security thus far. (Although, D.C. Schools Chancellor Michelle Rhee may be on her way to cutting a tenure-ending deal with Washington's union.)

This is something that Staiger and Rockoff understand. Their point isn't that we can or should fire 80 percent of new hires, but that their work should be seen as a "thought experiment" on the extreme measures that would be required to really improve American education, provided we can't figure out how to find better teachers at the get-go or develop reliable methods of improving teachers once they're in the system.
There is a glimmer of hope, though, if we can learn to emulate a handful of small-scale school systems that seem to have had success making great teachers, either by picking stars or creating them. Students randomized into New York's (oversubscribed) charter schools outperform students who applied to these schools but drew low lottery numbers and were forced to attend public schools instead. The cumulative benefit of attending a New York City charter school is sufficiently large as to almost erase the math performance gap between low-income kids in Harlem and those in affluent suburbs by the time kids get to the eighth grade. Better teachers are surely part (but not all) of the explanation for this success. The charter schools have high teacher turnover but also have reputations for nurturing talent and improving classroom performance: They videotape rookie teachers; coach them intensively on pedagogy; focus relentlessly on results. It's painful, and it's hard work—hence the high turnover.

Uncommon Schools is one of these superstar school systems, and one of its directors, John King, is now the head of K-12 education for New York State. Firing 80 percent of new teachers isn't possible in rural areas in the state and wouldn't play well in the State Legislature in Albany, either. Despite past failures, King remains optimistic: The government is giving out billions of dollars to fund education innovation through its Race to the Top fund, and methods of teacher preparation at places like Uncommon are being studied with an eye to integrating them into larger school systems. Hopefully the new knowledge and programs generated by these efforts will help King figure out how to scale up his successes from the couple of thousand students enrolled at Uncommon to the 2 million attending public schools statewide.

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