Feature

Your Neighborhood School is a National Security Risk

Student achievement and merit are losing prospects in the era of "everybody wins"

By DOUG LEMOV

Recently, I spoke with a student I'll call Ella. She's a biochemistry major at a college in the Northeast now, but she went to high school in a town outside a medium-sized coastal city, the sort of town that families move to for the public schools.

Ella didn't squander the opportunity. She took seven AP classes; she took AP Calculus BC as a junior and a college-level class in linear algebra her senior year. She racked up a 96 average. Several teachers wrote her notes telling her they appreciated having her in class and encouraging her to continue in the STEM field.

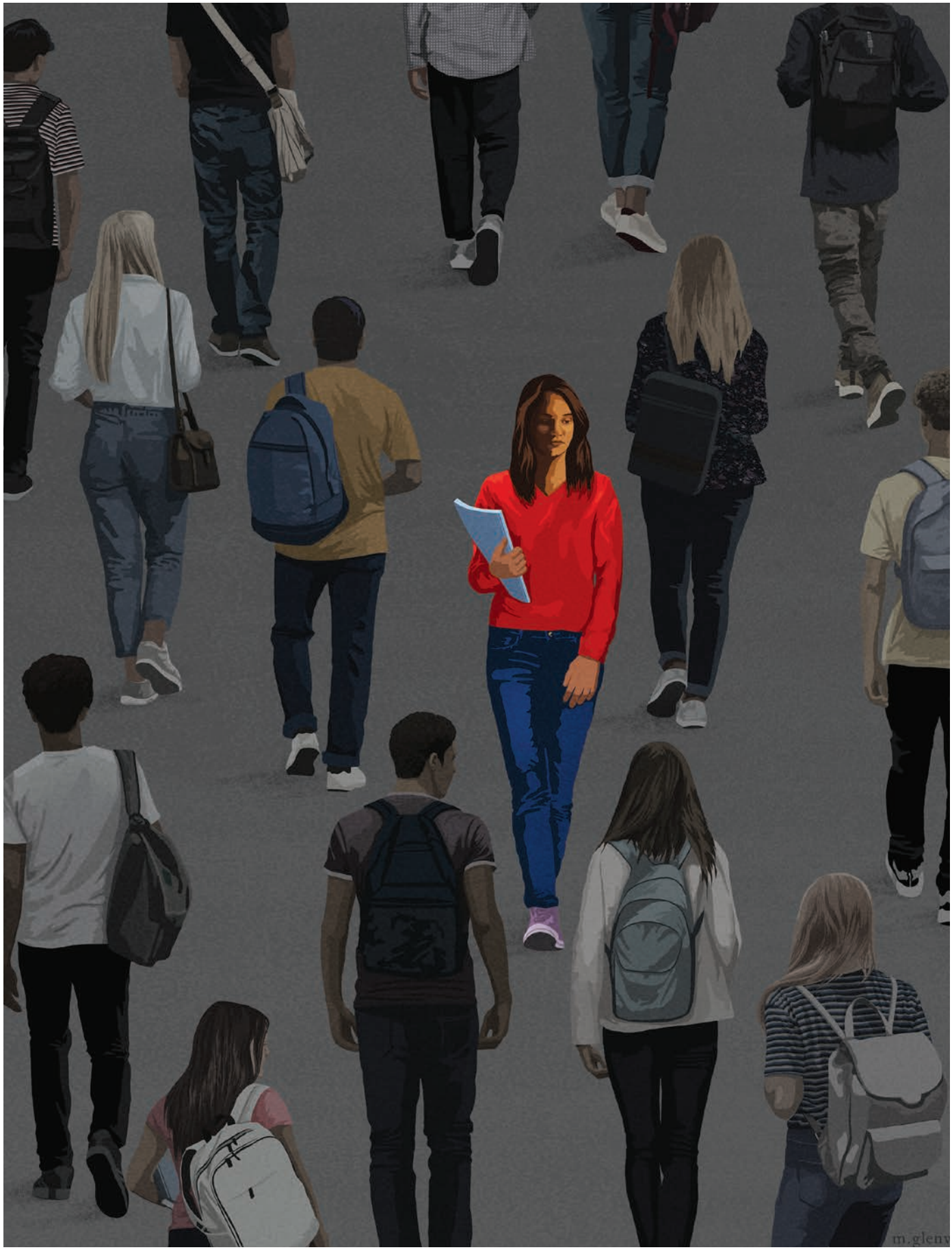
So you might be surprised to find that, thinking back, Ella considers a lot of what she did a mistake. "I was so stupid. Every party I skipped, I should have gone," she reflected. The kids who went to the parties didn't do as well on tests and papers as she did but, she observed, "nobody knows that but me."

She was motivated and liked learning, but she was also competitive. She assumed that she would work a little harder, delay some gratification, and her extra effort and accomplishment would be valued and acknowledged—rewarded, even. But everywhere she turned, the signal—*this is a student who has done more*—was diluted. She resented it.

Grade inflation was one way she felt her hard work had been undervalued at her high school. You got a 95 or a 96 if you did exceptional work, but pretty much everyone who did a credible job got a 93. A 90 definitely put you in the bottom half.

And the grade inflation was also grade *conflation.* As high grades get easier and easier to achieve, the highest grades can only go up so far. The difference between excellent and decent is compressed. The signal that 96 is different from 94 becomes hard to see. That distinction could still reveal meaningful differences, at least hypothetically, if it were calculated consistently and if people paid careful attention to it. A ranking of students would help, for example, but Ella's high school didn't do that, because the practice was seen as too competitive. Being on the honor roll didn't help, because the "honor roll" included more than half the students in each grade. Taking harder classes wasn't factored into grade-point-average calculations, though at least her school hadn't eliminated honors classes in the name of equity as other schools in her city had. And the degree of grade inflation within the school was wildly inconsistent, Ella said. Teachers in some classes—especially the easier ones—gave high grades lavishly. "It was pass/fail, basically. If you did the homework, you got a 95. I think the teachers thought that would make them popular."

It wasn't just Ella's high school either. Her district's elementary schools had replaced "traditional grading"—As and Bs—with a system of "standards-based grading." Students received grades on each of about 30 skills, reported on with statements such as, "Student can write sentences to create meaning." The scores arrived on an obscure and jargony scale: *mastery, partial mastery,* and *emerging mastery.* This list of descriptors signaled very little to parents, who could be forgiven for



MICHAEL GLENWOOD

wondering what the forest looked like with so many "emerging mastery" trees: "OK, so she has mastered *writing sentences to create meaning:* Did she write those sentences when asked to? Was the 'meaning' she created average? Exceptional? Does she excel at writing? Should we take her out to dinner and say, 'You are doing school just right; this is the path?' Was she in fact struggling?"

One way to disguise a signal is to clog the channel with so much information that people don't know what matters, what the signal means, or to what to compare it. The idea that grades should not be used to reveal which students have achieved more or worked harder—that grades should describe what a student *can* do, not what they *did* do—is heartily endorsed by many teachers, but you could be forgiven for suspecting that they have mixed incentives. Is the love for inscrutable grading an accountability dodge justified on sketchy educational grounds? Does it provide merely the illusion of data? A parent who can't really detect the signal is less likely to make waves or ask questions. And, of course, only some parents want there to be a signal. Making everyone look equally successful makes a lot of people happy.

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A sort of tacit collusion emerges: when almost everyone gets what they want, the school becomes easier to run. Teachers are happy because no one calls them to argue about grades, and kids aren't competitive and pushy. As Mike Schmoker points out in his book *Results Now 2.0*, the illusion that everyone is doing great "discourages demand for substantive changes." This makes the administrators happy too, and at Ella's school, as at most others, they took no steps to address grade inflation. It is no surprise that national data from the ACT show high school students' grades rising—a majority of college test-takers now report receiving an A in each subject—even as their achievement scores have stagnated or declined (see Figure 1).

In Ella's district, the net effect of all this had been to make comparison, recognition, and distinction increasingly difficult to achieve. The argument was that this was a good and healthy thing. Stress, we are told, is toxic, and a school is doing its part to ensure the wellbeing of the next generation if it removes the deleterious effects of competition, comparison, and anxiety.

In Defense of Stress

In fact, the common belief that stress is necessarily harmful is wrong, notes Stanford health psychologist Kelly McGonigal. Her book *The Upside of Stress* describes how she initially believed stress was toxic until, in reading studies she thought would provide evidence of its dangers, she found to her surprise that the people who are healthiest, happiest, and live longest are not those who have the least stress but rather those who are able to view stress as part and parcel of doing consequential things in life. What matters is your mindset toward stress, and ironically, the development of healthy thinking about stress requires exposure to it.

Sports offer a good example. Successful athletes know they can't avoid the stress of competition. They tell themselves, "I am feeling stress because I am about to test myself and see how well I can do. The stress I feel is a good thing because it tells me that I care." Athletes who adopt that attitude about stress can do so because they've often experienced pregame anxiety. They use self-talk to manage stress.

McGonigal isn't saying we should maximize stress but rather that its relationship to wellbeing isn't linear. Excessive stress is bad, but moderate stress is beneficial, normal, and often better than no stress. "Stress is what arises when something you care about is at stake," she writes. "You can't create a meaningful life without experiencing some stress." Stress motivates action, can accelerate learning, and often leads to a "tend and befriend" response that draws people together and builds community—which, in turn, helps to create wellbeing.

Figure 2 illustrates a Yerkes-Dodson Curve. It describes the typical relationship between stress and performance. There's a healthy debate about how placing different forms of "performance" on the vertical axis influences the shape of the curve—the optimal level of stress is different for an athlete and a laboratory scientist—but learning is one form of performance, and the principles of the curve apply. If I were a student, I would produce little or no work without some pressure. But if my teacher applies a bit of pressure—"There's a test on Monday" or "There's a paper due"—suddenly I am more apt to study over the weekend, to work hard on the paper. I'm likely to be focused. My performance improves. I don't want to be overanxious about the test. I want to know the test is important and be motivated to deliver my best. In fact, even if the test isn't graded, the stress involved in the process of recall helps encode learning.

Still, much of the time if you see a graph like this one, the word *stress* gets replaced along the horizontal axis with a more palatable term such as *pressure* or *challenge.* That tells you something about our collective mindset toward stress. Its connotation is so negative that people respond better to claims of its usefulness if the word *stress* is replaced with a euphemism.

This is characteristic of the way we treat many psychological phenomena in schools. We presume a linear relationship between the phenomenon and its results. It must be either good or bad. We can find clear examples of competition being counterproductive, indicating that we should seek to eliminate it. But competition is like stress. Too much of it is bad, but so is too little.

In Ella's district, as in so many others, students were told stress could harm them. "They were always telling us we could visit the counseling center during midterms. And I'd always I think: 'It's a test. Why do you think I need a counselor for that?'" Ella recalled.

Everybody Wins

Elite colleges too, Ella found, were oddly dismissive of academic distinction. When she scored 1500 on the SAT, she was happy. She thought it would set her apart, but that year almost all of the colleges she was applying to made the SAT optional. "The kids who got 1200 or 1300 didn't submit. My guidance counselor told me it wouldn't matter one way or the other if I submitted my scores." The key was her extracurriculars. Getting into the schools she wanted was in part a lottery—everyone was qualified, with high grades and no obligation to submit test scores—and in part a competition to curate a compelling array of enrichments and interests.

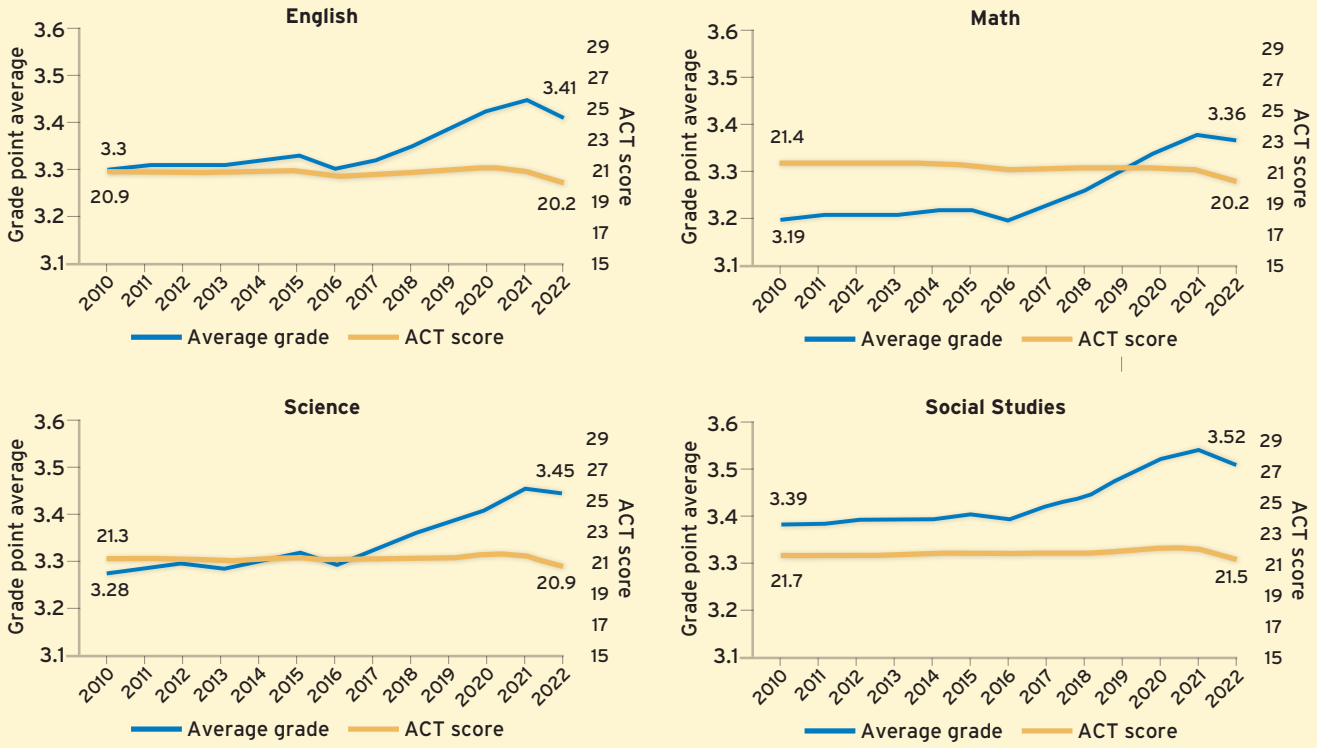
I noticed this when I visited campuses with my own kids. The first thing admissions staff said was often: "[Fill in the name of elite college here] is not a school for people who want to spend their time in the library. We're looking for people who are involved and engaged and active." You know, well-rounded. Everyone in the room would nod. Cool. Students who might want to spend part of a Friday night in the library seemed to be the one group you could safely criticize on a college campus.

At one school I visited, a parent asked about distribution requirements. "You have to take at least one 'quantitative' class," the admissions representative told the group, "but really it's easy to get around. Almost anything can count as a quantitative class." She listed examples of classes that could be used to avoid the necessity of technical or mathematical work.

We walked out of the meeting and my son said: "Can you

Course Grades Rise as ACT Test Scores Fall *(Figure 1)*

The course grades reported by students taking the ACT college-entrance exam have increased sharply across subjects since 2016 even as students' measured achievement in those subjects has stagnated or declined.



SOURCE: ACT Research Report 2023

imagine a university in Russia or India saying that? Don't worry about taking anything that's technical while you're here?"

Ella was no slouch outside the classroom, mind you. She played varsity lacrosse and was an accomplished violinist. She was a good athlete but not a star, and she decided rather than starting with places where she could be recruited, she would choose a school for academic reasons and try to make the lacrosse team as a walk-on. Music, for its part, meant submitting a portfolio of her work that would be labor intensive for a school to evaluate. She didn't want to study music seriously in college, and it seemed like a long shot that anyone in the music department would listen to her portfolio.

In short, Ella tried to sell herself as a student first, and she now sees what a mistake that was. In the end, the students who had earned median 94s to her top-of-the-class 96s and who took easier classes all seemed to get into the same schools she did—as well as some schools that she didn't. Some were better athletes, and some had curated experiences she could never afford, such as working in an animal sanctuary in Central America during vacations. Those students had understood that such experiences were more important than the SAT.

While our system was doing everything it could to weaken and dilute competition and meritocracy, the wider world was changing. Quickly.

This scenario did not apply in every case. Some students who got into their first-choice schools had top grades. But even they had more or less won the lottery that results from everyone looking about equally qualified. This randomness disconcerted Ella. "There were kids who got into top schools that I thought, 'Yup. Makes sense. She earned it.' But there were so many kids who you were just like, 'Are you kidding? I did all the work in the group project because she had literally no idea what was going on and now and she's going to Duke.'" Ella wanted the process to reflect academic merit and felt strongly that it didn't.

Maybe your reaction to this is: "So what? There are lots of smart kids. Not everyone gets in. Get over it. Ella's at a perfectly good school." Or maybe you're thinking: "There's probably more to the story; how does she know what the girl going to Duke did? Or dealt with?" Maybe you're even a little bit scornful of Ella's ambition and competitiveness. Shouldn't her motivation to go the extra mile be intrinsic? Maybe you assume that her parents were pushing her. The lesson should be for her to chill out.

But an interesting question to ask at the societal level is: What would we want a disappointed striver like Ella to say? *I should have worked harder* would be a good response. *I will work harder, learn more, grab the next opportunity.* But Ella's response—*I should have partied more; I've learned my lesson about going the extra mile*—is the opposite. She sees a larger ecosystem in which the desire for distinction, knowledge, and a drive to excel are mostly irrelevant.

Everybody wins, under the system that Ella grew up in—a system that guides and shapes the mindset of most American students—except a small number of kids who lose out in their quest to distinguish themselves. It's easy to dismiss those kids, and their often-foreign-born parents, as hypercompetitive and out of step with the times. Why do they need to compare themselves to anyone else? They got good grades. So what if everyone else did, too?

But think about Ella as a societal asset—someone who could, if she works hard and pushes herself, contribute one day to groundbreaking research. There's a second group that loses in a system that dilutes signals of excellence. That group is the society that, whether it realizes it or not, is counting on its Ellas to preserve its prosperity and national security. Because while our system was doing everything it could to weaken and dilute competition and meritocracy, the wider world was changing. Quickly.

Meanwhile, in Bakhmut and Beijing . . .

Schools are, among other things, the supply chain for the principal resource on which a modern democracy depends: knowledge, understanding, and, just maybe, belief in shared principles like meritocracy that unite a society.

You may wonder what an economic term like "supply chain" has to do with education, but supplying talent for the economy is part of what schools are supposed to do. We are edging closer to the brink of a new cold war with either Russia or China or both—a competition in which knowledge and advanced technical expertise will play an increasing role in protecting our society from tyranny and maintaining our global position.

In Ukraine, for example, a western-trained military has bravely held off a vastly larger and belligerent invading army. Part of the story of that success lies in the power of meritocracy: decisionmaking devolved to proven mid-level officers close to the conflict, effective ideas from all levels of the organization quickly identified, approved, and scaled. In the Ukrainian army, talented people and worthy ideas are valued and leveraged far better than in Russia's sclerotic hierarchy. That has had a direct result in sustaining Ukraine's national sovereignty.

But consider how different that view from the front lines of democracy would be without the technological superiority of HIMARS rockets guided by Starlink satellite Internet, an advanced missile-defense system that Russia cannot crack. No technological superiority, no democracy.

It's worth pausing here to note the perspective of Ilya

Buynevich, a professor of geology at Temple University who grew up under Soviet rule in Ukraine. He wrote recently in a periodical called *Campus Reform* about a paradox he was noticing on campus. While almost every aspect of society in Soviet Ukraine was less meritocratic than the U.S.—it was a blend of enforced egalitarianism bereft of opportunities for the masses and massive privilege for the connected few—the education system was in fact far more meritocratic than the U.S. education system. "Soviet universities produced excellent scientists despite (not thanks to) the political system," he wrote. "Merit was the decisive factor past all the nepotism and corruption." Even a corrupt autocracy knew that scientific expertise was the key to their global ambitions. "When administrators in the Soviet Union wanted to tip the scales on class enrollment, they would make the examinations much harder."

As armed conflict and cold wars alike have increasingly come to favor technologically superior societies, we might be tempted to feel optimistic. That's us! But that optimism may not be justified. Are we ready to stay a step ahead of the Russians and the Chinese? Who is more likely to develop the next Starlink?

Start looking for answers at the top. Though the United States has perhaps the best universities in the world, the science and engineering programs that churn out the ideas and expertise that culminate in microprocessors and HIMARS are stocked heavily with students from abroad, and especially with students from the nations whose allegiance is now most tenuous. To put it in economic terms, we rely on imports. The domestic supply of college graduates with advanced scientific expertise is insufficient to fill the seats in our own elite programs.

"Foreign students accounted for 54 percent of master's degrees and 44 percent of doctoral degrees issued in STEM fields in the United States in 2016–2017," a Congressional Research Service report noted in 2019. The number of foreign-born STEM students had doubled since 1988–89. The two most common nations of origin were China—now an explicit geopolitical rival—and India—currently wavering between allegiance to the West and alignment with China and Russia.

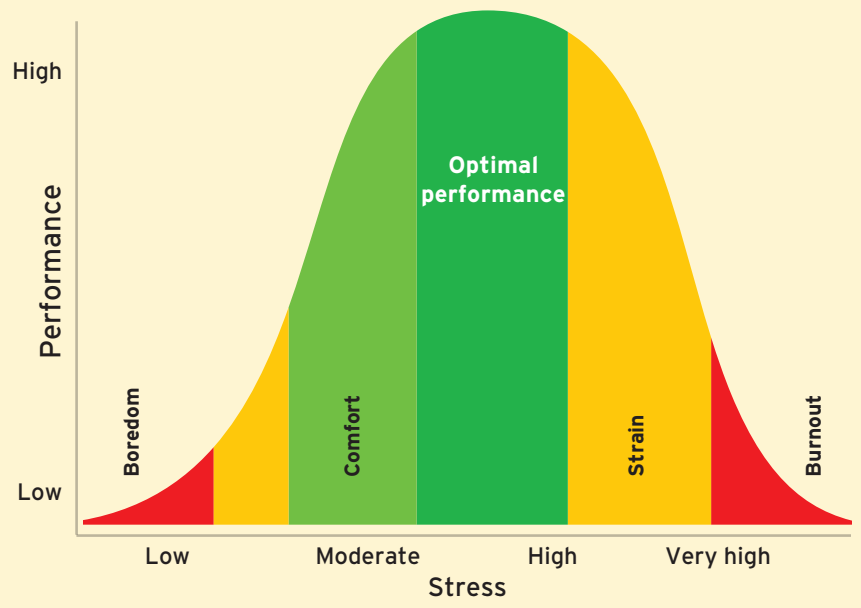
Pick up a copy of the *Financial Times, The Economist,* or the *Wall Street Journal* and you will read about the national security priority of "de-risking" supply chains. Is it a problem that 80 percent of the copper and lithium and rare earth metals necessary to manufacture cutting-edge technology tools come from China or places firmly in the Chinese sphere of influence? You bet it is. But the supply chain of the most important building block of all, technical expertise and knowledge, is far from de-risked.

Consider the new factories being developed under the Biden administration's CHIPs and Science Act, designed to boost the semiconductor industry for both economic and national security reasons. The date for opening the first domestic chip fabrication factories has been pushed back because the technical expertise required to install and manage the high-tech fabrication and design equipment is all but nonexistent in the U.S. The Taiwanese firm opening a plant in Arizona made plans to bring in staff from Taiwan to train American staff when they couldn't hire the people they needed. Immigrants—that is, people educated by school systems other than our own—"account for about 40% of highly skilled workers in America's semiconductor industry," *The Economist* reported. By 2030, the broader high-tech economy, in- cluding fields critical to national security, will face a shortage of 1.4 million qualified workers. "Set this against the total of roughly 70,000 students who complete undergraduate degrees in engineering in America each year, and the scale of the deficit becomes apparent," the article went on to note.

Stress and Performance across Fields

(Figure 2)

The Yerkes-Dodson Curve illustrates how the relationship between stress and performance is not linear: Performance increases as stress rises from low levels and then falls off when stress becomes excessive.



SOURCE: Adapted from Ian Martin, "Pressure-Performance Stress Curve," Delphis (2020)

One could argue that the mass importation of technical expertise isn't all bad. Many of those foreign nationals who come to our universities choose to stay in the U.S., and this represents a strategic benefit. But it's a supply chain that is far from secure. And the underlying reality—that the supply chain exists because it provides what our own school systems cannot—should scare us. We want to make sure we can supply our own rare earth minerals if China cuts off the supply, but we are blithely unconcerned about the insufficient supply of domestically educated students in advanced technological programs. And those students who do attend such programs in U.S. universities are weighted heavily toward first-generation immigrants and their children: they are students who strive because of the cultures they brought with them when they moved here. They are the families Ella's school overlooked in favor of the illusion that everyone is a winner.

They are people like Mr. Lee, a parent at a school where I taught many years ago. He was a scientist who had emigrated from Taiwan. He was paying a lot of money to send his son, Charles, to the independent school where I worked so he would be well prepared for higher education. But he wanted to meet with me because he was so disappointed. "There are pep rallies for sports," Mr. Lee observed. "Where are the pep rallies for school? Where is attention given to the best students?"

Not knowing anything better to say, I told him the truth. "We don't really do that here." By "here," I meant the school, but the point could certainly apply more broadly.

Most of the builders of tomorrow's cutting-edge technology will probably not come from our own school systems; and those American students who do reach this pinnacle will do so because they hear some other music than what our schools' sound systems are playing. They will toil away in schools where young people are convinced they have math anxiety, where advanced classes are eliminated in the name of equity, and where the slightest whiff of competition is seen as unhealthy. And then they will apply to colleges where admissions staff proudly announce that the merely scholarly should just as well look elsewhere.

China, fighting hard to erode our global influence, must laugh at stories about American schools eliminating advanced classes, about how teaching algebra is a form of oppression, about how elite colleges market themselves as places where it's easy to avoid math, and about how the best universities in the world are downplaying objective academic criteria in favor of a vague and subjective calculus of extracurricular experiences—many of which only the wealthy can access.

The Chinese must clearly see the global advantage our school system provides them. You could almost imagine that they invented TikTok to nudge us along our path to mediocrity while they use technical expertise as a tool to shape a new world order. In fact, differences in how the app's algorithm functions in the U.S. and in China, where the platform promotes a steady stream of educational and patriotic videos and children are limited to 40 minutes of content each day, suggest as much. "It's almost like they recognize that technology is influencing kids' development, and they make their domestic version a spinach version of TikTok, while they ship the opium version to the rest of the world," a social media expert told *60 Minutes*.

Consider for a moment the difficulty of enforcing sanctions against Russia. Ever wonder why so many Latin American and African nations have failed to join the sanctions and generally seem lukewarm to the pro-democracy world order the U.S. and its allies lead?

In large part it's because China has quietly built a sphere of influence through a model that involves providing developing nations with sophisticated engineering projects beyond the scope of what they could otherwise accomplish and then supplying untenable financing for those projects. Ghana owes China $2 billion for infrastructure projects while Zambia owes $6 billion, and in all likelihood those countries cannot pay back their loans. Those nations and dozens like them are firmly in the Chinese sphere of influence now. In much of the developing world, the urgency of debt refinancing wins out over any lure of democracy. The Chinese have eroded a coalition aligned to Western interests through engineering expertise and corrosive capital, while schools like Ella's steer students away from technically demanding and "stressful" fields like engineering.

A Solution

So, what to do about it? How do we reinvigorate the culture of meritocracy and achievement in our schools? How do we prepare ourselves for a future that both honors the capacity of our young people—that challenges them so they achieve their best—and prepares our nation to retain its global position and secure its safety?

Restore the SAT and ACT. Measures of achievement matter—first, because they communicate that achievement itself matters. That's true even if you believe that such tests are gameable. If gaming the SAT means paying a tutor to help you catch up on math or learn several hundred vocabulary words, or even more cynically to help you learn strategies to manage your mindset during testing situations, we should fix that. But even the workarounds that prosperous families come up with benefit society more than if those same parents try to outfox the system by paying for private fencing lessons or hiring a consultant to help little Johnny craft his image more artfully through his essay. *People prepare for tests by studying.* This reinforces the purpose of the endeavor and produces benefits even before the test is taken.

More important, the SAT and ACT remain the most objective measures of academic achievement we have. Are they perfect? No. But they are far more objective than classroom grades—and far less open to gaming, privilege, and perverse incentives. And they are a lot less manipulable than, say, an inscrutable system that prizes high-priced activities such as a lifetime of tennis

lessons. Help me to see the equity benefits there.

Some kind of objective measure (or as objective a measure as we can devise) is always the first step. That's the case even if we then consider other factors that add context to the scores of students from schools that prepare them less well—a 1400 from a student who attends a school with precious few advanced courses and who is first in their family to go to college is in many ways more impressive than a 1500 from a student at an elite boarding school. Having an objective measure does not mean we cannot adjust it to address inequities in the system. But an explicitly academic measure is far more just and meritocratic than a system of nebulous, inchoate incentives that reward students who have the resources to curate their lives around that system. Did people really think the wealthy would not be best positioned to game a system based on extracurriculars? Kudos to MIT, the first university to push back on the movement to eliminate the SAT. What they found when they examined the data, of course, was that making an entrance exam optional decreased equity.

Some of the best universities are downplaying objective academic criteria in favor of a vague and subjective calculus of extracurricular experiences—many of which only the wealthy can access.

But also expand and broaden the assessments. One critique of college admissions tests is that their scores don't correlate well with college success because what they measure is too narrow—mostly math and English in the case of the SAT, on the assumption that scores in those subjects are proxies for achievement in other academic areas. Compare that to England's system of GCSEs, or General Certificates of Secondary Education. Students take assessments at the culmination of their pre-university years in a variety of subjects they choose. These subject-specific assessments measure knowledge rather than proxy skills. They are better correlated to what happens in college, more rigorous, and, if technical expertise is our goal, would allow us to test specific areas like chemistry, biology, and physics. A system like England's would help immensely by better measuring achievement and more of it.

Data can also help. Imagine a school that reported to parents and others the average grade in each class and the 25th- and 75th-percentile grades. Imagine if, when you got your child's grade on a test or a report card, you had that information. Was her 94 above or below the mean? Does "emerging mastery" mean a warning light is flashing for my 3rd grader? With data, the discussion begins. There is sunlight. Parents are empowered. Data provide not only knowledge for parents but also a degree of accountability for schools that allow rampant and asymmetrical grade inflation. Perhaps private institutions couldn't be made to do this, but public schools certainly could.

We shouldn't limit this push for change to K–12 schools, by the way. Rampant grade inflation at the university level doesn't help either. The average grade at elite colleges in America is an A. Everybody wins once again! But it raises the question: How does muting the incentive to work a little harder and do a little more affect students' knowledge and achievement?

Combat the idea that lower standards are an equity win. Equity means ensuring that each child has the fullest opportunity to reach the highest possible standards in a fair way. It means great schools in every community. Eliminating advanced courses and putting caps on achievement is folly from both an economic and national-security perspective. And it is a catastrophe for and insult to any group on whose behalf we suggest eliminating challenging work and rigorous standards. I don't believe that there is any group of Americans who can't or won't try to rise to such challenges. It's time we fought back. Why not provide advanced courses earlier for every child who wants them in every school?

Overcome our fear that competition and stress will hurt young people. The narrative that competition hurts rather than strengthens us, that stress will break us and our children, is the root of the problem. Where did that narrative come from? We don't eschew competition in sports, at least not at the secondary school level and higher. Shielding kids from competition in the academic sphere communicates that we think children are fragile. While we don't want to create a pressure cooker for our youth, being able to handle stress, challenge, and competition is a valuable skill for creating a life of meaning.

One could almost imagine it as a conspiracy. A few people get to the head of the line and are prosperous. They want their children to maintain a place in the world that affords them opportunity and success. They argue that there should be no more competition, that competition hurts people. For those already at the top of the heap, it's a great strategy for perpetuating status. It's just not very fair—or very useful for a country that tells itself it's a meritocracy. To remain competitive and secure as a nation, we must expect our young people to strive to reach their full potential and give them every chance to do so.

Doug Lemov is the author of several books on teaching, including Teach Like a Champion 3.0. *His next book, co-authored by Colleen Driggs and Erica Woolway, will focus on science- and research-based literacy instruction.*