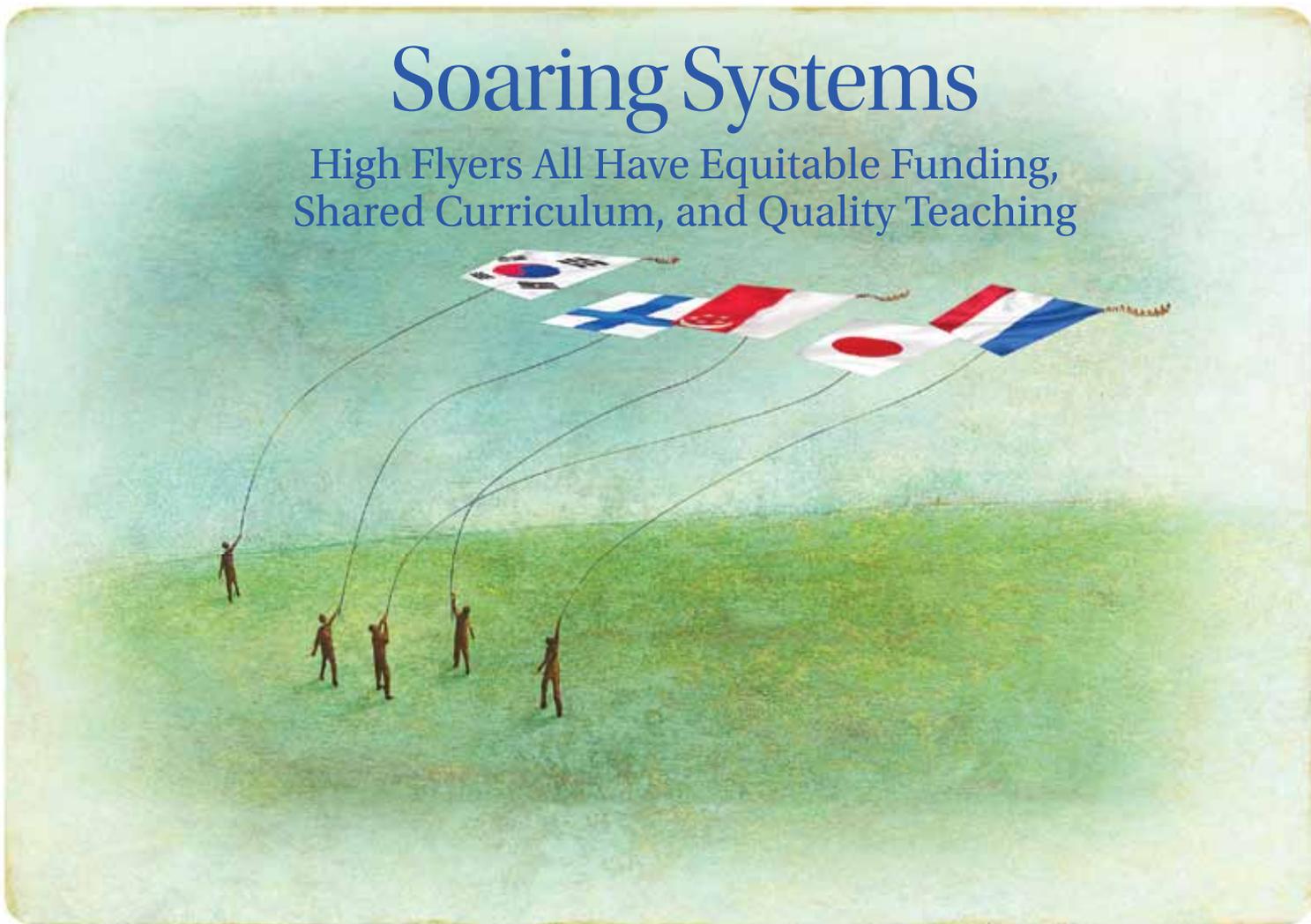


# Soaring Systems

## High Flyers All Have Equitable Funding, Shared Curriculum, and Quality Teaching



I said to my children, “I’m going to work and do everything that I can do to see that you get a good education. I don’t ever want you to forget that there are millions of God’s children who will not and cannot get a good education, and I don’t want you feeling that you are better than they are. For you will never be what you ought to be until they are what they ought to be.”

—Martin Luther King, Jr.<sup>1</sup>

BY LINDA DARLING-HAMMOND

**N**ow more than ever, high-quality education for all is a public good that is essential for the good of the public. As the fate of individuals and nations is increasingly interdependent, the quest for access to an equitable, empowering education for all people has become a critical issue for the American nation as a whole. No society can

*Linda Darling-Hammond is the Charles E. Ducommun Professor of Education at Stanford University, where she is codirector of the Stanford Center for Opportunity Policy in Education and the founding director of the School Redesign Network. She is a former president of the American Educational Research Association and a member of the National Academy of Education. This article is adapted with permission of the Publisher. From Linda Darling-Hammond, *The Flat World and Education*, New York: Teachers College Press. Copyright © 2010 by Teachers College Press, Columbia University. All rights reserved.*

thrive in a technological, knowledge-based economy by depriving large segments of its population of learning. But at a time when three-quarters of the fastest-growing occupations require post-secondary education, just over one-third of our young people receive a college degree.<sup>2</sup> Meanwhile, in many European and Asian nations, more than half of young people are becoming college graduates. At a time when high school dropouts are unlikely to secure any job at all, our high school graduation rate—stuck at about 70 percent—has dropped from first in the world to the bottom half of industrialized nations. At a time when children of color comprise a majority in most urban districts, and will be the majority in the nation as a whole by 2025,<sup>3</sup> we face pernicious achievement gaps that fuel inequality, shortchanging our young people and our nation.

Recent analyses of data prepared for school equity cases in more than 20 states have found that on every tangible measure—from qualified teachers and reasonable class sizes, to adequate textbooks, computers, facilities, and curriculum offerings—schools serving large numbers of students of color have significantly fewer resources than schools serving more affluent, white students.<sup>4</sup> Many such schools are so severely overcrowded that they run a multitrack schedule with a shortened school day and school year, lack basic textbooks and materials, do not offer the courses students would need to be eligible for college, and are staffed by a parade of untrained, inexperienced, and temporary teachers.<sup>5</sup>

Although many U.S. educators and civil rights advocates have

fought for higher quality and more equitable education over many years—in battles for desegregation, school finance reform, and equitable treatment of students within schools—progress has been stymied in many states over the last two decades as segregation has worsened, and disparities have grown. While students in the highest-achieving states and districts in the United States do as well as their peers in high-achieving nations, our continuing comfort with profound inequality is the Achilles’ heel of American education.

These disparities have come to appear inevitable in the United States; however, they are *not* the norm in developed nations around the world, which fund their education systems centrally and equally, with additional resources often going to the schools where students’ needs are greater. These more equitable investments made by high-achieving nations are also steadier and more focused on critical elements of the system: the quality of teachers and teaching, the development of curriculum and assessments that encourage ambitious learning by both students and teachers, and the design of schools as learning organizations that support continuous reflection and improvement. With the exception of a few states with enlightened long-term leadership, the United States, by contrast, has failed to maintain focused investments in any of these essential elements.

The result is that the United States is standing still while more focused and steadfast nations move rapidly ahead. Our inertia is not due to a lack of handwringing or high-blown rhetoric. In 1983, *A Nation at Risk* decried a “rising tide of mediocrity” in education and called for sweeping reforms. In 1989, then-President George H. W. Bush and the 50 governors announced a set of national goals that included ranking first in the world in mathematics and science by the year 2000. However, by 2006, on the Programme for International Student Assessment (PISA), a test conducted by the Organisation for Economic Co-operation and Development (OECD), the United States ranked 35th out of 40 developed countries in mathematics, sandwiched between Azerbaijan and Croatia, and 29th out of 40 developed countries in science, between Latvia and Lithuania.<sup>6</sup> The results were only slightly better in 2009, when the United States ranked 31st in mathematics, significantly below the OECD average, and 23rd in science.<sup>7</sup>

## Learning from Others

One wonders what we might accomplish as a nation if we could finally set aside what appears to be our de facto commitment to inequality, so profoundly at odds with our rhetoric of equity, and put the millions of dollars spent continually arguing and litigating into building a high-quality education system for all children. To imagine how that might be done, one can look at nations that started with very little and purposefully built highly productive and equitable systems, sometimes almost from scratch, in the space of only two to three decades.

Let’s briefly look at three very different nations—Finland, Singapore, and South Korea—that built strong education systems, nearly from the ground up. None of these nations was succeeding educationally in the 1970s, when the United States was the unquestioned education leader in the world. All created productive *teaching and learning systems* by expanding access while investing purposefully in ambitious educational goals using strategic approaches to build teaching capacity.

I use the term “teaching and learning system” advisedly to

describe a set of elements that, when well designed and connected, reliably support all students in their learning. These elements ensure that students routinely encounter well-prepared teachers who work in concert around a thoughtful, high-quality curriculum, supported by appropriate materials and assessments. These elements also help students, teachers, leaders, and the system as a whole continue to learn and improve.

While none of these countries lacks problems and challenges, each has created a much more consistently high-quality education system for all of its students than has the United States. And while no system from afar can be transported wholesale into another context, there is much to learn from the experiences of those who have addressed problems we encounter. A sage person once noted that, although it is useful to learn from one’s own mistakes and

Disparities appear inevitable in the United States; however, developed nations around the world fund education centrally and equally.



experiences, it is even wiser to learn from those of others.

Although Finland, Singapore, and South Korea are very different from one another culturally and historically, all three have made startling improvements in their education systems over the last 30 years. Their investments have catapulted them from the bottom to the top of international rankings in student achievement and attainment, graduating more than 90 percent of their young people from high school and sending large majorities through college, far more than in the much wealthier United States. Their strategies also have much in common. All three:

- *Fund schools adequately and equitably*, and add incentives for teaching in high-need schools. All three nations have built their education systems on a strong egalitarian ethos, explicitly confronting and addressing potential sources of inequality. In South Korea, for example, a wide range of incentives is available to induce teachers to serve in rural areas or in urban schools with disadvantaged students. In addition to earning bonus points toward promotion, incentives for equitable distribution of teachers include smaller class sizes, less in-class teaching time, additional stipends, and opportunities to choose later teaching appointments.<sup>8</sup> The end result is a highly qualified, experienced, and stable teaching force in all schools, providing a foundation for strong student learning.
- *Organize teaching around national standards and a core curriculum* that focus on higher-order thinking, inquiry, and problem solving through rigorous academic content. Working from lean national curriculum guides that have recommended

assessment criteria, teachers collaborate to develop curriculum units and lessons at the school level, and develop school-based performance assessments—which include research projects, science investigations, and technology applications—to evaluate student learning. In Singapore, these are increasingly part of the examination system. In Finland, the assessments are primarily local but are guided by the national curriculum, which emphasizes students’ abilities to reflect on, evaluate, and manage their own learning. Unlike in the United States, narrowing the curriculum has not been an issue. Take South Korea: it devotes the large majority of instructional time in every grade to a liberal arts curriculum that includes social studies, science, physical education, music, fine arts, moral education, foreign language (English), practical arts, and a range of extracurricular activities and electives.<sup>9</sup> Curriculum offerings are similarly comprehensive in Singapore and Finland.

- *Eliminated examination systems that had once tracked students* into different middle schools and restricted access to high school. Since adopting national curriculum guidelines, these nations have been committed to helping all students master the same essential skills and content until the beginning of high school—not to devising watered-down versions for some students.
- *Use assessments that require in-depth knowledge of content and higher-order skills.* All three countries have matriculation exams for admission to college. These are the only external examinations in Finland and South Korea. In Singapore, examinations are given in the sixth and ninth grades as well as at the end of high school. These exams have open-ended questions that require deep content knowledge, critical analysis, and writing. Although the matriculation exams are not used to determine high school graduation, they are taken by nearly all students and they set a high bar for high school coursework. In Finland, where there are no external standardized tests used to rank students or schools, most teacher feedback to students is in narrative form, emphasizing descriptions of their learning progress and areas for growth.<sup>10</sup> Like the National Assessment of Educational Progress in the United States, Finland uses a centrally developed assessment given to samples of students at the end of the second and ninth grades to inform curriculum and school investments. The focus of these open-ended assessments is to provide information to support learning and problem solving, not to allocate sanctions and punishments.
- *Invest in strong teacher education* programs that recruit top students, completely subsidize their extensive training programs, and pay them a stipend while they learn to teach. In all three nations, teacher education programs were overhauled to increase teachers’ pedagogical knowledge and skills, on top of



a deep mastery of the content areas they will teach. Finnish teachers’ preparation includes at least a full year of clinical experience in a model school associated with a university. Within these model schools, student teachers participate in problem-solving groups, a common feature in Finnish schools. All teachers are trained in research methods so that they can “contribute to an increase of the problem-solving capacity of the education system.”<sup>11</sup> Their problem-solving groups engage in a cycle of planning, action, and reflection/evaluation that is reinforced throughout teacher education and is a model for what teachers will plan for their own students, who are expected to engage in similar kinds of research and inquiry in their own studies.

- *Pay salaries that are equitable* across schools and competitive with other careers, generally comparable to those of engineers. Teachers are viewed as professionally prepared and are well respected. Working conditions are supportive, including substantial participation in decision making about curriculum, instruction, assessment, and professional development.

**In the United States, enormous energy is devoted to discussions of the achievement gap. Much less attention is paid to the opportunity gap.**

- *Support ongoing teacher learning* by ensuring mentoring for beginning teachers and providing 15 to 25 hours a week for all teachers to plan collaboratively and engage in analyses of student learning, lesson study, action research, and observations of one another’s classrooms, which help them continually improve their practice. All three nations have incentives for teachers to engage in research on practice, and all three fund ongoing professional development opportunities in collaboration with universities and other schools.
- *Pursue consistent, long-term reforms* by setting goals for expanding, equalizing, and improving the education system and by steadily implementing these goals, making thoughtful investments in a high-quality educator workforce and in school curriculum and teaching resources that build the underpinnings for success. This has been made possible in part by the fact that these systems are managed by professional ministries of education, which are substantially buffered from shifting political winds. Frequent evaluations of schools and the system as a whole have helped guide reforms. In each nation, persistence and commitment to core values have paid off handsomely, as all three are ranked in the very top tier of countries on international assessments and have among the most equitable outcomes in the world.

All three nations have undertaken these elements in a systemic fashion, rather than pouring energy into a potpourri of innovations and then changing course every few years, as has often been the

case in many communities in the United States, especially in large cities. And while these three small nations—each comparable in size to a midsize U.S. state—have conducted this work from a national level, similar strategies have been successfully employed at the state or provincial level in high-scoring Australia, Canada, and New Zealand, and regions such as Hong Kong and Shanghai in China. They demonstrate how it is possible to build a *system* in which students are routinely taught by well-prepared teachers who are given time to collaboratively reflect on and refine the curriculum, supported by appropriate materials and assessments that foster learning for students, teachers, and schools alike.

### Core Content and Key Skills for All

In the United States, enormous energy is devoted to discussions of the achievement gap. Much less attention, however, is paid to the opportunity gap—the accumulated differences in access to key educational resources that support learning at home and at school. These key resources include high-quality curriculum, good educational materials, expert teachers, personalized attention, and plentiful information resources.

In contrast, nations around the world are transforming their school systems to eliminate opportunity gaps; they are expanding educational access to more and more of their people, and they are revising curriculum, instruction, and assessment to meet the demands of the knowledge economy. Today, there is very little curriculum differentiation until high school in the education offerings for students in high-achieving jurisdictions, such as Finland, Hong Kong, Singapore, and South Korea, which have sought, as part of their reforms, to equalize access to a common, intellectually ambitious curriculum.<sup>12</sup> In the last two years of high school, there is often differentiation of courses by interest, aptitude, and aspirations, but all courses of study offer high-quality options for later education and careers. By comparison, countries like France that have continued their tradition of sorting students much earlier are, like the United States, lagging in international assessments.

This is not surprising, as a substantial body of research over the last 40 years has found that (1) the combination of teacher and curriculum quality explains most of a school's contribution to achievement, and (2) access to a rich curriculum is a more powerful determinant of achievement than initial achievement levels. That is, when students of similar backgrounds and initial achievement levels are exposed to more or less challenging curriculum material, those given the richer curriculum ultimately outperform those given the less challenging curriculum.<sup>13</sup>

These efforts to reduce tracking have been supported by social policies that reduce childhood poverty and allow students to start school on a level playing field, and that give their teachers much better training and much more non-instructional time to plan and collaborate. In addition, over time, as all children are exposed to similar high-quality lessons, the variance in their knowledge and skills decreases. Ensuring access to a more common curriculum supports greater equity, and ultimately makes

teaching all students easier.

Finland provides an excellent example. Although there was a sizable achievement gap among students in the 1970s, strongly correlated to socioeconomic status, this gap has been progressively reduced as a result of curriculum reforms starting in the 1980s—and it has continued to grow smaller and smaller in the 2000, 2003, and 2006 PISA assessments. By 2006, Finland's between-school variance on the PISA science scale was only 5 percent, whereas the average between-school variance in other OECD nations was about 33 percent.<sup>14</sup> In 2009, Finland had the lowest between-school variance of any OECD country on the PISA reading scale; at 7.7 percent, it was dramatically lower than the OECD average of 41.7 percent.<sup>15</sup> This small variability is true even in schools in Helsinki and elsewhere that receive large numbers of previously less well-educated immigrants from Africa and the Middle East. (Large between-school variation is generally related to social inequality, including both the



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differences in achievement across neighborhoods differentiated by wealth, and the extent to which schools are funded and organized to reduce or expand inequalities.)

Today's expectation that schools will enable all students, rather than a small minority, to learn challenging skills to high levels creates an entirely new mission for schools. Instead of merely "covering the curriculum" or "getting through the book," this new mission requires that schools substantially enrich the intellectual opportunities they offer while meeting the diverse needs of students. This demands not only more skillful teaching, but also a coherent curriculum that engages students in learning essential concepts in ways that develop strong thinking skills.

**I**t is imperative that America close the achievement gap among its children by addressing the yawning opportunity gap. Given the critical importance of education for individual and societal success in the flat world we now inhabit, inequality in the provision of education is an antiquated tradition the United States can no longer afford. If "no child left behind" is to be anything more than empty rhetoric, we will need a policy strategy that creates a rich and challenging curriculum for all students, and supports it with thoughtful assessments, access to knowledgeable, well-supported teachers, and equal access to school resources.

Smart, equitable investments are not only the right thing to do, they will, in the long run, save far more than they cost. The savings

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## High-Performing Nations

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will include the more than \$200 billion we now lose in wages, taxes, and social costs annually due to dropouts; the \$50 billion we pay for lost wages and for incarceration tied to illiteracy and school failure; and the many tens of billions wasted each year on reforms that fail, fads that don't stick, unnecessary teacher turnover, avoidable special education placements, remedial education, grade retention, summer school, lost productivity, and jobs that move overseas.<sup>16</sup>

The path to our mutual well-being is built on educational opportunity. Central to our collective future is the recognition that our capacity to survive and thrive ultimately depends on ensuring for all of our people what should be an unquestioned entitlement—an inalienable right to learn. □

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