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THE IMPORTANCE OF WORLD-CLASS SCHOOLS FOR ECONOMIC SUCCESS

Introduction

The Organization for Economic Co-Operation and Development (OECD) is placing increasing emphasis on education and training, as the relative importance of knowledge and skills for the success of advanced economies is rapidly increasing. In addition, in the global economy, the yardstick for educational success is no longer merely improvement by national standards, but the best performing education systems internationally. International comparisons have thus become an important tool to assess and drive educational change:

- By showing what is possible in education, they can help to optimise policies but also to reflect on more fundamental alternatives to existing policies, which become apparent when these are contrasted with policies and practices pursued by other countries. For example, the OECD PISA assessments[1] show Canadian 15-year-olds, on average, to be well over a school year ahead of 15-year-olds in the U.S. in key subjects such as mathematics or science. They also show socio-economically disadvantaged Canadians much less at risk of poor educational performance than is the case in the U.S.
- They can help set policy targets in terms of measurable goals achieved by other systems and help to identify policy levers and to establish trajectories for reform. Just on February 24, for example, the United Kingdom's Prime Minister announced the goal to raise student performance in the United Kingdom to Rank 3 on the international PISA mathematics assessment and Rank 6 on the PISA science assessment, together with a range of policies to achieve these targets[2].
- They can assist with gauging the pace of educational progress and reviewing the reality of educational delivery at the frontline. For example, Poland raised the performance of its 15-year-olds in PISA reading by the equivalent of almost a school year in less than a decade. It also succeeded in halving performance differences between schools. The long-term economic value of a similar improvement in student performance for the U.S. could be equivalent to over $40 trillion in additional national income.
- Last but not least, they can support the political economy of educational reform, which is a major issue in education where any pay-off to reform almost inevitably accrues to successive governments if not generations.

This paper (1) provides an analysis of where the U.S. stands, compared with the principal industrialized countries internationally, (2) quantifies the economic value of improvements in learning outcomes, and (3) identifies some policy levers for educational improvement that emerge from international comparisons and transcend economic and cultural settings.

The U.S. is Losing its Educational Advantage

Among the 30 OECD countries with the largest expansion of college education over the last decades, most still see rising earnings differentials for college graduates, suggesting that an increase in knowledge workers does not necessarily lead to a decrease in their pay as is the case for low-skilled workers (OECD, 2008). The other player in the globalization process is technological development, but this too depends on education, not just because tomorrow's knowledge workers and innovators require high levels of education, but also because a highly-educated workforce is a pre-requisite for adopting and absorbing new technologies and increasing productivity. Together, skills and technology have flattened the world such that all work that can be digitized, automated and outsourced can now be done by the most effective and competitive individuals, enterprises or countries, wherever they are.

No country has been able to capitalize on the opportunities this "flat world" provides more than the U.S., which can draw on the most highly educated labor force among the principal industrialized nations, at least when measured in terms of formal qualifications. However, this advantage is largely a result of the "first-mover advantage" which the U.S.

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[1] PISA stands for the OECD Program for International Student Assessment, a test of student knowledge and skills that is administered by the OECD on behalf of participating governments on a three-yearly basis in now 70 countries.

[2] The announcement was made on 24 February 2010, see http://www.number10.gov.uk/Page22580.

gained after Word War II by massively increasing enrollments. That advantage is now eroding quickly as more and more countries reach and surpass U.S. qualification levels. In fact, many countries are now close to ensuring that virtually all young adults leave schools with at least a high school degree (OECD average 82%), which the OECD indicators highlight as the baseline qualification for reasonable earnings and employment prospects. Over time, this will translate into better workforce qualifications in these countries. In contrast, the U.S. (78%) stood still on this measure and among OECD countries only New Zealand, Spain, Turkey, and Mexico now have lower high school completion rates than the U.S. Even when including qualifications such as the GED (Graduate Equivalent Degree) that people can acquire later in life to make up for unsuccessful school completion, the U.S. has slipped from rank 1 among OECD countries for adults born in the 1940s to rank 11 among those born in the 1970s. Again, that is not because completion rates in the U.S. declined, but because they have risen so much faster in many other countries. Two generations ago, South Korea had the economic output of Afghanistan today and was at rank 24 in terms of educational output among today's OECD countries. Today it is the top performer in terms of the proportion of successful school leavers, with 96% of an age cohort obtaining a high school degree. Similar trends are visible in college education, where the U.S. slipped between 1995 and 2005 from rank 2 to rank 14, not because U.S. college graduation rates declined, but because they rose so much faster in many OECD countries. Graduate output is particularly low in science, where the number of people with a college degree per 100,000 employed 25-to-34-year-olds was 1,081 compared with 1,376 on average across OECD countries and more than 2,000 in Australia, Finland, Korea and Poland (OECD, 2009a). Whether the U.S. can continue to compensate for this, at least in part, through utilizing foreign science graduates will depend on the development of labor-markets in other countries. The developments will be amplified over the next decades as countries like China or India are raising their educational output at an ever increasing pace.

Quality of Educational Outcomes in the U.S.

Quantity matters, but quality is even more important. The OECD Program for International Student Assessment (PISA) extends the picture that emerges from comparing national degrees with the most comprehensive international assessment of student knowledge and skills. PISA represents a commitment by 70 countries that together make up close to 90% of the world economy to monitor the outcomes of education systems in terms of student achievement on a regular basis, within an internationally agreed framework, and in innovative ways that reflect judgments about the skills that are relevant to adult life[3].

On the 2006 PISA science assessment of 15-year-olds, the U.S. ranked 21st among the 30 OECD countries[4] (OECD, 2007). Moreover, while the proportion of top-performers in the U.S. was similar to the OECD average, the U.S. had a comparatively large proportion of poor performers: 24.4% of U.S. 15-year-olds did not reach Level 2, the baseline level of achievement on the PISA scale at which students begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology[5]. A longitudinal follow-up of 29,000 PISA students in Canada suggests that the absence of foundation skills below the PISA Level 2 signals serious risks for students in their initial transition from education to work and of failing to benefit from further education and learning opportunities in their later life. For example, the odds of Canadian students who had reached PISA Level 5 in reading at age 15 to achieve a successful transition to post-secondary education by age 19 were 16 times higher than for those who

[3] PISA seeks to assess not merely whether students can reproduce what they have learned in science, mathematics, and reading – which is easy to teach and test - but also how well they can extrapolate from what they have learned and apply their knowledge in novel situations.

[4] The confidence interval extends from the 18th to the 25th rank.

[5] To reach Level 2 requires competencies such as identifying key features of a scientific investigation, recalling single scientific concepts and information relating to a situation, and using results of a scientific experiment represented in a data table as they support a personal decision. In contrast, students not reaching Level 2 often confuse key features of an investigation, apply incorrect scientific information, and mix personal beliefs with scientific facts in support of a decision.

had not achieved the baseline Level 2, even after adjustments for socio-economic differences are made (OECD, 2010a)[6]. By age 21, the odds were even 20 times higher, suggesting that the advantages of success in high school are growing further as individuals get older.

Students who did not surpass the most basic performance level on PISA were not a random group. The results show that socio-economic disadvantage has a particularly strong impact on student performance in the U.S. Indeed, 18% of the variation in student performance in the U.S. is explained by students' socio-economic background – this is significantly more than at the OECD average level and contrasts, for example, with just 8% in Canada or 7% in Japan. This is not simply explained by a socio-economically more heterogeneous U.S. student population, but mainly by an above-average impact of socio-economic differences on learning outcomes. In other words, the U.S. is among the OECD countries where two students of different socio-economic background show the largest difference in learning outcomes. Other countries with similar levels of disparities included only France, New Zealand, the Czech Republic, the United Kingdom, Belgium and Germany. It would perhaps be tempting to attribute the performance lag of U.S. students to the challenges which socio-economic disparities and ongoing immigrant inflows pose to the education system. However, while the integration of students with an immigrant background poses significant challenges in many countries, among the countries that took part in the latest PISA assessment there are several with a larger immigrant intake than the U.S. which, nevertheless, scored better.

The Cost of the Achievement Gap

The international achievement gap is imposing on the U.S. economy an invisible yet recurring economic loss that is greater than the output shortfall in what has been called the worst economic crisis since the Great Depression. Using economic modelling to relate cognitive skills – as measured by PISA and other international instruments – to economic growth shows that even small improvements in the skills of a nation's labour force can have very large impacts on the future well-being of countries. A recent study carried out by the OECD in collaboration with the Hoover Institute at Stanford University suggests that a modest goal of having the U.S. boost its average PISA scores by 25 points over the next 20 years – which is less than the most rapidly improving education system in the OECD, Poland, achieved between 2000 and 2006 alone – could imply a gain of U.S.D 41 trillion for the U.S. economy over the lifetime of the generation born in 2010 (as evaluated at the start of reform in terms of real present value of future improvements in GDP). Bringing the U.S. up to the average performance of Finland, the best performing education system in PISA in the OECD area, could result in gains in the order of U.S.D 103 trillion. Narrowing the achievement gap by bringing all students to a level of minimal proficiency for the OECD (i.e. reaching a PISA score of 400), could imply GDP increases for the U.S. of USD 72 trillion according to historical growth relationships (OECD, 2010b). The predictive power of student performance at school on subsequent successful education and labour-market pathways is also demonstrated through longitudinal studies (OECD, 2010a). In either case, the evidence shows that it is the quality of learning outcomes, as demonstrated in student performance, not the length of schooling or patterns of participation, which contribute most to economic outcomes.

The gains from improved learning outcomes, put in terms of current GDP, far outstrip today's value of the short-run business-cycle management. This is not to say that efforts should not be directed at issues of economic recession, but it is to say that the long-run issues should not be neglected.

Some Lessons from High Achieving Countries

Perhaps the most important lesson to be learned from PISA is that strong performance, and indeed improvement, is possible. Whether in Asia (e.g., Japan and Korea), in Europe (e.g., Finland) or in North America (Canada), many countries display strong overall performance and, equally important, show that poor performance in school does not automatically follow from a disadvantaged socio-economic background and that the achievement gap can be

[6] No such data are available for the U.S.

significantly narrowed. Furthermore, some countries show that success can become a consistent and predictable educational outcome: In Finland, the country with the strongest overall results in PISA, the performance variation between schools amounts to only 5% of students' overall performance variation, so that parents can rely on high and consistent performance standards in whatever school they choose to enroll their children[7].

Performance on international comparisons cannot simply be tied to money, since only Luxembourg spends more per primary student than the U.S. and only Luxembourg, Switzerland, and Norway spend more per middle and high school student. The results for the U.S. reflect rather a range of inefficiencies. That point is reinforced by the fact that in international comparisons of primary grade school children the U.S. does relatively well by international standards which, given the country's wealth, is what would be expected. The problem is that as they get older, children make less progress each year than children in the best performing countries. The issue is therefore not just poor kids in poor neighbourhoods, but about many kids in many neighbourhoods. It is noteworthy that spending patterns in many of the world's successful education systems are markedly different from the U.S. These countries invest the money where the challenges are greatest rather than making resources contingent on the economic context of the local communities in which schools are located, and they put in place incentives and support systems that attract the most talented school teachers into the most difficult classrooms. They have often reformed inherited, traditional and bureaucratic systems of recruiting and training teachers and leaders, of paying and rewarding them and of shaping their incentives, both short-term and long-term. They often also devote a higher share of spending to classroom education than is the case in the U.S. and, different from the U.S., often favor better teachers over smaller class sizes (OECD, 2009a).

Looking beyond financial resources, PISA suggests that schools and countries where students work in a climate characterized by high performance expectations and the readiness to invest effort, good teacher-student relations, and high teacher morale tend to achieve better results. Interestingly, U.S. 15-year-olds usually rate themselves comparatively highly in academic performance in PISA, even if they did not do well comparatively. In part that may be due to culture, but one interpretation is also that students are being commended for work that would not be acceptable in high performing education systems. Many countries have pursued a shift in public and governmental concern away from the mere control over the resources and content of education towards a focus on outcomes. This has driven efforts to articulate the expectations that societies have in relation to learning outcomes and to translate these expectations into educational goals and standards. Educational standards have influenced many of the top performing education systems in various ways, helping them to establish rigorous, focused and coherent content at all grade levels; reduce overlap in curricula across grades; reduce variation in implemented curricula across classrooms; facilitate co-ordination of various policy drivers ranging from curricula to teacher training; and reduce inequity in curricula across socio-economic groups. The establishment, by states, of 'common core standards' in the U.S., which can be considered among the most innovative and evidence-based approaches to standard-setting in the field, is an important step in that direction that could address the current problem of widely discrepant state standards and cut scores that have led to non-comparable results and that often mean that a school's fate depends more than anything else on what state it is located and, perhaps even more importantly, that students across the U.S. are left on an unequal footing as to how well they are prepared to compete in the US labor-market.

Coupled with this trend have been efforts in countries to devolve responsibility to the frontline, encouraging responsiveness to local needs, and strengthening intelligent accountability (OECD, 2009a). The U.S. is, of course, a decentralized education systems too, but while many systems have decentralized decisions concerning the delivery of educational services while keeping tight control over the definition of outcomes, the design of curricula, standards and testing, the U.S. is different in that has decentralized both inputs and control over outcomes. Moreover, while the U.S. has devolved responsibilities to local authorities, schools themselves have less discretion in decision-making than is the case in many OECD countries. In this sense, the question for the U.S. is not just how many charter schools it establishes but how to build the capacity for all schools to assume charter-like autonomy, as happens in some of the best performing education systems (OECD, 2007).

[7] For the United States, the corresponding figure is 29%, the OECD average is 33.

What further distinguishes the approaches to professional accountability developed in Finland, the use of pupil performance data and value added analyses in England, or the approaches to school self evaluation in Denmark, is that these strike a different balance between using accountability tools to maintain public confidence in education, on the one hand, and to support remediation in the classroom aimed at higher levels of student learning and achievement on the other. These countries have gone beyond systems of test-based external accountability towards building capacity and confidence for professional accountability in ways that emphasize the importance of formative assessment and the pivotal role of school self-evaluation, the latter often in conjunction with school inspection systems that systematically intervene with a focus on the most troubled schools rather than dispersing efforts through identifying too many schools as needing improvement which one could consider another drawback of the current NCLB system. In some systems, strategic thinking and planning takes place at every level of the system. Every school discusses what the national standards might mean for them, and decisions are made at the level of those most able to implement them in practice. Where school performance is systematically assessed, the primary purpose is often not to support contestability of public services or market-mechanisms in the allocation of resources. Rather it is to provide instruments to reveal best practices and identify shared problems in order to encourage teachers and schools to develop more supportive and productive learning environments.

Another major drawback of the current NCLB system, the 'single bar' problem that leads to undue focus on students nearing proficiency rather than valuing achievement growth, is addressed in many countries through assessment and accountability systems that incorporate progressive learning targets which delineate pathways characterising the steps that learners typically follow as they become more proficient and establish the breadth and depth of the learner's understanding of the domain at a particular level of advancement. One of the earliest approaches in this direction, the 'key stages' in England, for example, provides a coherent system that allows measuring individual student progress across grades and subjects, thus also avoiding the problems associated with the 'multiple measures' defining annual yearly progress in NCLB that have tended to lead to an undue emphasis on reading and mathematics.

The global trend is leading towards multi-layered, coherent assessment systems from classrooms to schools to regional to national to international levels that:

- support improvement of learning at all levels of the education system;
- are increasingly performance-based and make students' thinking visible;
- add value for teaching and learning by providing information that can be acted on by students, teachers, and administrators;
- and that are part of a comprehensive and well-aligned instructional learning system that includes syllabi, associated instructional materials, matching exams, professional scoring and teacher training.

Drawing a clearer line between assessments, on the one hand, and individual high-stakes examination systems helps countries to avoid sacrificing validity gains for efficiency gains, which tends to be an issue for the U.S. that is also mirrored in, by international standards, an unusually high proportion of multiple choice items.

Second, in most of the countries that performed well in PISA, it is the responsibility of schools and teachers to engage constructively with the diversity of student interests, capacities, and socio-economic contexts, without having the option of making students repeat the school year, or transferring them to educational tracks or school types with lower performance requirements. To achieve this, education systems seek to establish bridges from prescribed forms of teaching, curriculum and assessment towards an approach predicated on enabling every student to reach their potential. Many high performing education systems have developed elaborate support systems that, first of all, help individual teachers to become aware of specific weaknesses in their own practices, and that often means not just creating awareness of what they do but changing the underlying mindset. They then seek to provide their teachers with an understanding of specific best practices and, last but not least, motivate them to make the necessary changes with instruments that go well beyond material incentives. Of course, the U.S. has some of the most innovative schools and teachers that have tailored curriculum and teaching methods to meet the needs of children and young people with great success for many years. However, what distinguishes the education systems of, for example, Victoria in Australia, Alberta in Canada, or Finland is the drive to make such practices systemic, through the establishment of clear learning pathways through the education system and fostering the motivation of students to become independent and lifelong

learners. Obviously such 'personalized learning' demands both curriculum entitlement and choice that delivers a breadth of study and personal relevance. But the personalization in these countries is in terms of flexible learning pathways through the education system rather than individualized goals or institutional tracking, which have often been shown to lower performance expectations for students and tend to provide easy ways out for teachers and schools to defer problems rather than solving them.

Third, many high performing systems share a commitment to professionalized teaching, in ways that imply that teachers are on a par with other professions in terms of diagnosis, the application of evidence-based practices, and professional pride. To achieve this, they often do four things well: First, they attract the best graduates to become teachers, realizing that the quality of an education system cannot exceed the quality of its teachers. For example, countries like Finland or Korea recruit their teachers from the top 10 percent graduates. Second, they develop these teachers into effective instructors, through, for example, coaching classroom practice, moving teacher training to the classroom, developing strong school leaders and enabling teachers to share their knowledge and spread innovation. Singaporean teachers, for example, get 100 hours of fully paid professional development training each year. Third, they put in place incentives and differentiated support systems to ensure that every child is able to benefit from excellent instruction (McKinsey, 2007). The image here is of teachers who use data to evaluate the learning needs of their students, and are consistently expanding their repertoire of pedagogic strategies to address the diversity in students' interests and abilities. Such systems also often adopt innovative approaches to the deployment of differentiated staffing models. Examples include teacher selection processes as seen in Finland, highly specified professional development programmes as with the National Literacy Strategy in England, and teacher promotion based on professional competence as in Canada or Sweden.

These efforts move away from traditional educational models that often still operate like a heavy bureaucratic production chain, where year after year new reform ideas are placed on top; where in the middle layers unfinished and incoherent reforms pile up; and where at the bottom, schools and teachers are confronted with incoherent regulation and prescription that they cannot make sense of and for which they feel no responsibility. High performing education systems tend to create a "knowledge rich" education system, in which teachers and school principals act as partners and have the authority to act, the necessary information to do so, and access to effective support systems to assist them in implementing change. Of course, everywhere education is a knowledge industry in the sense that it is concerned with the transmission of knowledge, but a recent OECD study on teachers, teaching and learning suggests that education is often still quite far from becoming a knowledge industry in the sense that *its own practices* are being transformed by knowledge about the efficacy of *its own practices* (OECD, 2009b). In many other fields, people enter their professional lives expecting their practice to be transformed by research, but that is still rather rare in education. There is, of course, a large body of research about learning but much of it is unrelated to the kind of real-life learning that is the focus of formal education. Central prescription of what teachers should do, which still dominate today's schools, may not transform teachers' practices in the way that professional engagement, in the search for evidence of what makes a difference, can.

External accountability systems are an essential part of all this, but so are lateral accountability systems. Among OECD countries, there are countless tests and reforms that have resulted in giving schools more money or taking money away from them, developing greater prescription on school standards or less prescription, or making classes larger or smaller, often without measurable effects. What distinguishes top-performer Finland is that it places the emphasis on building various ways in which networks of schools stimulate and spread innovation as well as collaborate to provide curriculum diversity, extended services and professional support. It fosters strong approaches to leadership and a variety of system leadership roles that help to reduce between-school variation through system-wide networking and to build lateral accountability. It has moved from "hit and miss" policies to establishing universal high standards; from uniformity to embracing diversity; from a focus on provision to a focus on outcomes; from managing inputs and a bureaucratic approach to education towards devolving responsibilities and enabling outcomes; and from talking about equity to delivering equity. It is a system where schools no longer receive prefabricated wisdom but take initiatives on the basis of data and best practice.

In Conclusion

In one way, international educational benchmarks make disappointing reading for the U.S. But they also indicate a way forward. Results from PISA show that strong performance is possible. Whether in Asia (e.g., Japan and Korea), in Europe (e.g., Finland) or in North America (Canada), many countries display strong overall performance and, equally important, show that poor performance in school does not automatically follow from a disadvantaged socio-economic background, even if social background is an important challenge everywhere. Furthermore, some countries show that success can become a consistent and predictable educational outcome, with very little performance variation across schools. Last but not least, Poland demonstrated that it is possible to achieve performance gains equivalent to three-quarters of a school year within less than a decade. This paper has identified some of the policy levers that are prevalent in high performing education systems.

The international achievement gap is imposing on the U.S. economy an invisible yet recurring economic loss that is greater than the output shortfall in what has been called the worst economic crisis since the Great Depression. Using economic modelling to relate student performance– as measured by PISA and other international instruments – to economic growth shows that even small improvements in the skills of a nation's labour force can have very large impacts on future well-being. A modest goal of having the U.S. boost its average PISA scores by 25 points over the next 20 years – which is less than the most rapidly improving education system in the OECD, Poland, achieved between 2000 and 2006 alone – implies a gain of U.S.D 41 trillion for the U.S. economy over the lifetime of the generation born in 2010 (as evaluated at the start of reform in terms of real present value of future improvements in GDP). Bringing the U.S. up to the average performance of Finland, OECD's best performing education system in PISA, could result in gains in the order of U.S.D 103 trillion. Closing the achievement gap by bringing all students to a level of minimal proficiency for the OECD (i.e. reaching a PISA score of 400), could imply GDP increases for the U.S. of U.S.D 72 trillion according to historical growth relationships. The predictive power of student performance at school on subsequent successful education and labour-market pathways is also demonstrated through longitudinal studies. In both cases, the evidence shows that it is the quality of learning outcomes, as demonstrated in student performance, not the length of schooling or patterns of participation, which makes the difference. The gains from improved learning outcomes, put in terms of current GDP, far outstrip today's value of the short-run business-cycle management. This is not to say that efforts should not be directed at immediate issues of economic recession, but it is to say that the long-run issues should not be neglected.

Addressing the challenges will become ever-more important as the best education systems, not simply improvement by national standards, will increasingly become the yardstick to success. Moreover, countries such as the U.S. will not simply need to match the performance of these countries, but actually do better if their citizens want to justify higher wages.

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SUMMARY - THE IMPORTANCE OF WORLD-CLASS SCHOOLS FOR ECONOMIC SUCCESS

A growing impact of education for economic success

The relative importance of knowledge and skills for the economic success of individuals and nations is rapidly increasing. In addition, in the global economy, the yardstick for educational success is no longer merely improvement by national standards, but the best performing education systems internationally.International comparisons can drive educational improvement in several ways:

- By showing what is possible in education, they can help optimize policies but also to reflect on alternatives to existing policies. For example, the international PISA assessments show Canadian 15-year-olds, on average, to be well over a school year ahead of 15-year-olds in the U.S. They also show socio-economically disadvantaged Canadians much less at risk of poor educational performance than is the case in the U.S.
- They can assist with gauging the pace of educational progress and help reviewing the reality of educational delivery at the frontline. For example, Poland raised the reading performance of its 15-year-olds by the equivalent of almost a school year in less than a decade. It also succeeded in halving performance differences between schools. The long-term economic value of a similar improvement in outcomes for the U.S. could be equivalent to over $40 trillion in additional national income. If the U.S were to catch up with the best performing education system, Finland, the U.S. economy could gain $103 trillion. The international and national achievement gaps are imposing on the U.S. economy an invisible yet recurring economic loss that is greater than the output shortfall in the current economic crisis.
- They can help setting policy targets in terms of measurable goals achieved by other systems and help to identify policy levers and to establish trajectories for reform.

Education systems in the industrialized world have improved more rapidly than the United States. Over the last decade, the U.S. has fallen from second place to 14th in terms of its college graduation rate. While primary-grade school children tend to do well by international standards, the latest PISA assessments show U.S. students performing below the OECD average. The US also has a comparatively large achievement gap, which signals serious risks for students in their initial transition from education to work and of failing to benefit from further education and learning opportunities in their later life.

Education Standards

National educational standards have helped many of the top performing education systems in important ways to establish rigorous, focused and coherent content at all grade levels; reduce overlap in curricula across grades; reduce variation in implemented curricula across classrooms; and facilitate co-ordination of various policy drivers ranging from curricula to teacher training. Countries have often coupled the establishment of standards with devolving responsibility to the frontline, encouraging responsiveness to local needs. The U.S. is, of course, a decentralized education system too, but while many systems have decentralized decisions concerning the delivery of educational services while keeping tight control over the definition of outcomes, the design of curricula, standards and testing, the U.S. is different in that has decentralized both inputs and control over outcomes. Moreover, while the U.S. has devolved responsibilities to local authorities, schools themselves have less discretion in decision-making than is the case in many OECD countries.

The establishment of ‘common core standards’ in the U.S is an important step that could address the current problem of widely discrepant state standards and ‘cut’ scores that have led to non-comparable results and often mean that a school’s fate depends more than anything else on what state it is located. Do you want to focus this on students’ fates, too?

Accountability Systems in Other Countries

While performance data in the U.S. are largely used for punitive accountability purposes, other countries tend to give greater weight to guide intervention, reveal best practices and identify shared problems in order to encourage teachers and schools to develop more supportive and productive learning environments. They also seek to intervene in the most troubled schools, rather than identifying too many schools as needing improvement - a drawback of the current NCLB system.

Another major drawback of the current NCLB system, the 'single bar' problem that leads to undue focus on students nearing proficiency rather than valuing achievement growth, is addressed in many countries through assessment and accountability systems that comprise progressive learning targets which delineate pathways characterising the steps that learners typically follow as they become more proficient and establish the breadth and depth of the learner's understanding of the domain at a particular level of advancement. The global trend here is leading towards multi-layered, coherent assessment systems from classrooms to schools to regional to national to international levels that: support improvement of learning at all levels of the system; are increasingly performance-based; add value for teaching and learning by providing information that can be acted on by students, teachers, and administrators; and are part of a comprehensive and well-aligned instructional learning system that includes syllabi, associated instructional materials, matching exams, professional scoring and teacher training.

An Effective Teaching Force

Third, many high performing systems share a commitment to professionalized teaching. To achieve this, they often do four things well: First, they attract the best graduates to become teachers, realizing that the quality of an education system cannot exceed the quality of its teachers. For example, countries like Finland or Korea recruit their teachers from the top 10 percent graduates. Second, they develop these teachers into effective instructors, through, for example, coaching classroom practice, moving teacher training to the classroom, developing strong school leaders and enabling teachers to share their knowledge and spread innovation. Third, they put in place incentives and differentiated support systems to ensure that every child is able to benefit from excellent instruction. Fourth, they place emphasis on building various ways in which networks of schools stimulate and spread innovation as well as collaborate to provide curriculum diversity, extended services and professional support and foster strong approaches to leadership that help to reduce between-school variation through system-wide networking and to build lateral accountability.