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Will You Want to Hire Your Own Kids? (Will Anybody Else?)

A Conversation about Workforce Readiness

by Susan Stewart

The next generation is not being adequately prepared for the jobs it will inherit. High school and college graduates are showing deficiencies in both basic and applied skills, and a real lack of preparedness for today's world of work. Workforce entrants are caught between an educational system that teaches—and measures—one set of skills and a rapidly evolving workplace that demands another.

Policy debates haven't addressed this gap, concentrating instead on the gap between affluence and need, between the high-ranking high schools of magazine cover fame and the schools targeted by the federal No Child Left Behind legislation that mandates standardized testing in every public school. But the reality is this: the skills schools are testing are not the skills the workplace needs. Even if we bring everybody up to speed, we'll still be traveling down the wrong road.

Can we change course in time? How do we bring a massive educational system into alignment with 21st century workforce needs? The sector that has the most at stake—business—is the most likely candidate to lead the way. Recently The Conference Board hosted a dialogue among the CEOs of three major companies that are deeply involved in workforce readiness. Their thoughts, and highlights from the latest research on this troubling subject, are the framework for this report.

Editor's note: This Executive Action report is based on a CEO dialogue on workforce readiness that took place at The Conference Board 2009 Annual Dinner, held in New York in May. The panel was moderated by Tony Wagner, co-director of the Change Leadership Group (CLG) at the Harvard Graduate School of Education and included Murray Martin, chairman, president, and CEO of Pitney Bowes Inc.; W. James McNerney, Jr., chairman, president, and CEO, The Boeing Company; and Barry Salzberg, CEO, Deloitte LLP. The views expressed do not necessarily represent The Conference Board, which is a nonprofit, non-advocacy organization.

Will you want to hire your own kids? Maybe not

How bad is it?

The evidence is not just anecdotal. In a survey of more than 400 U.S. employers, high school graduates were ranked “deficient” in all 10 skills that employers rated as “very important” to workforce success.¹ And graduates of two- and four-year colleges didn’t do much better. Two-year graduates were ranked “deficient” in seven of the 10 skills, and excellent in only one: *information technology application* (which makes sense, considering this is the generation that has been wired since birth). Four-year graduates were ranked “deficient” in *writing in English, written communications, and leadership*.

“I’m genuinely alarmed about the younger generation’s lack of critical skills. The lack of proficiency in a number of disciplines, including math, science, and basic literacy, is unacceptable.”

Barry Salzberg
CEO
Deloitte LLP

Deficiencies are across the board, in basic skills (reading, writing, and math) and applied skills such as critical thinking and problem solving. The United States, which used to rank first in the world, now ranks 10th—graduating only half of its college students.²

High school graduation rates are harder to pin down, as there is no national standard for reporting them, but are by most estimates about 67 percent—much lower than other industrialized countries—and closer to 50 percent

in some districts.³ So one out of three students drops out of high school in the United States, and one out of two drops out of college. That’s a lot of dreams deferred.

This is serious

These numbers are about more than the personal fulfillment of students; they are creating a weakness at the core of the U.S. economy.

“Our fundamental competitiveness is at stake. And a cynic would say that the only way you’re finally going to get into the end zone on this issue is for some of our important industries to lose competitiveness globally. The fact is, this is already happening in a number of cases. . . .”

W. James McNerney, Jr.
Chairman, President, and CEO
The Boeing Company

When companies lobby Congress to raise the quotas on skilled immigrants, it is not only because they are champions of diversity; it is because they can’t find skilled workers in their own country. Offshoring is the other side of this coin, and no matter how you toss it, the United States may be losing.

“When you look at America as 48th as far as math and science, that’s unacceptable,” says Murray Martin of Pitney Bowes. “If we’re going to continue to be a leader in this world, if we’re going to have a competitive society, if we’re going to have a marketplace that can go and compete and take on everyone else in the world, we need to step our education up.”

1 *Are They Really Ready To Work? Employers’ Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce*, The Conference Board, Report BED-06-Workforce, 2006, p. 41.

2 Tony Wagner, *The Global Achievement Gap: Why Even Our Best Schools Don’t Teach the New Survival Skills Our Children Need—And What We Can Do about It* (New York: Perseus Books, 2008), p. xx; “Education at a Glance 2004,” Organisation for Economic Co-operation and Development (OECD), available online at <http://www.oecd.org>

3 Wagner, *The Global Achievement Gap*, p. 114; Lyndsay Pinkus, “Who’s Counted, Who’s Counting? Understanding High School Graduation Rates,” Alliance for Excellent Education, available online at <http://www.all4ed.org/files/WhosCounting.pdf>

“ Because global corporations can get the best talent from anywhere in the world, it’s imperative for America to produce a well-educated workforce and remain competitive.”

Murray Martin
Chairman, President, and CEO
Pitney Bowes Inc.

The problem is education - the solution is also education

How did we get here? By standing still. Technology exploded, and the industrial economy gave way to the knowledge economy.

We are, according to Tony Wagner of Harvard’s Graduate School of Education, “between a rock and a hard place,” thanks to the way the internet and globalization have changed the way we learn, communicate, and do business. Everything has changed—except U.S. education.

Wagner cites “two immutable forces” that have caused the gap between workforce preparedness and business needs:

Schools are teaching obsolete skills In the global knowledge economy, students need to know problem solving, critical thinking, and how to collaborate and adapt. These skills are very different from rote memorization and regurgitation.

Schools are teaching in obsolete ways Today’s students don’t learn the way their teachers, parents, or employers did. They learn by doing, by interacting, and through the internet, not by sitting in classrooms listening to what Salzberg calls “sages on stages.”



Murray Martin, Chairman, President, and CEO of Pitney Bowes Inc. (left) speaks on workforce readiness at The Conference Board’s 2009 Annual Dinner (at right: James McNeerney, CEO of Boeing).

7 Survival Skills: The Competencies Workers Need and Schools Don’t (Adequately) Teach

- 1 Critical thinking and problem solving
- 2 Collaboration across networks and leading by influence
- 3 Agility and adaptability
- 4 Initiative and entrepreneurialism
- 5 Effective oral and written communication
- 6 Accessing and analyzing information
- 7 Curiosity and imagination

Source: Tony Wagner, *The Global Achievement Gap: Why Even Our Best Schools Don’t Teach the New Survival Skills Our Children Need – And What We Can Do about It* (New York: Perseus Books, 2008), p. 67.

“ Schools haven’t changed; the world has. And so our schools are not failing. Rather, they are obsolete—even the ones that score the best on standardized tests.”

Tony Wagner
Co-Director, Change Leadership Group
Harvard Graduate School of Education ⁴

⁴ Wagner, *The Global Achievement Gap*, p. 114; Lyndsay Pinkus, “Who’s Counted, Who’s Counting? Understanding High School Graduation Rates,” Alliance for Excellent Education, available online at <http://www.all4ed.org/files/WhosCounting.pdf>

How Jobs Are Changing

A look at trends in demand for abstract, routine, and manual tasks

The explosion of technology since 1960 has changed the nature of work in the United States. Abstract thinking requirements have grown relative to requirements for manual and routine labor. However, those jobs where routine and manual tasks have grown – think of a package delivery person – are also requiring more complementary applied skills such as professionalism and communication.

Chart 1
Trends in U.S. job task content: 1960–2002

Task input, relative to 1960 task distribution

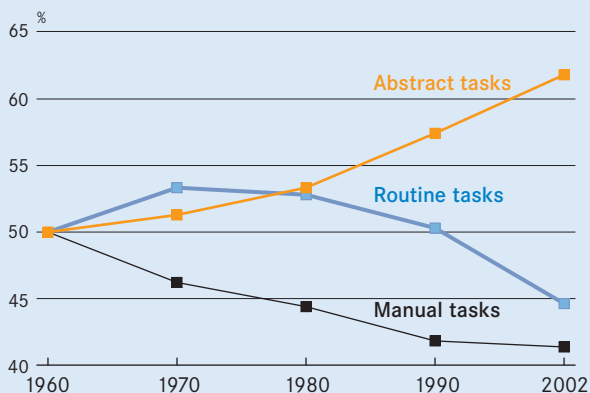
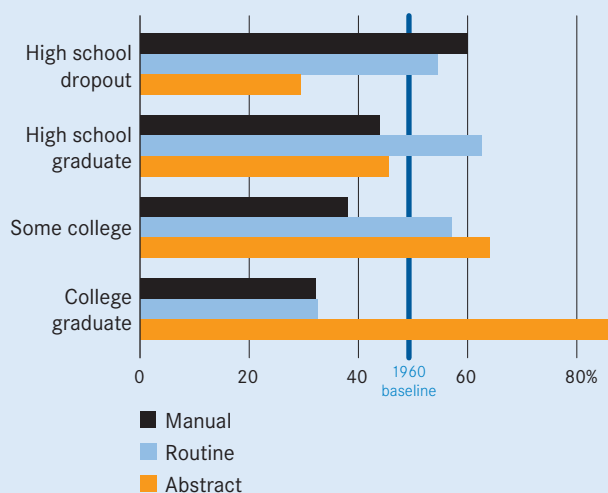


Chart 2
How does task demand affect demand for human capital?



Source: David H. Autor, material presented to an Advisory Group meeting of The Conference Board Innovation and Competitiveness Project, February 9, 2007; and David H. Autor, Frank Levy, and Richard J. Murnane, “The Skill Content of Recent Technological Change: An Empirical Exploration,” *Quarterly Journal of Economics* 118, no. 4 (2003).

Education has traditionally been about content; the student ingests facts—the better the schools, the more facts are learned. According to Wagner: “The majority of educators believe that it’s rigor—that to teach more, you have to teach more stuff.” But a head full of timeless knowledge, knowledge about the Peloponnesian Wars, say, or the nature of string theory, while certainly endowing its owner with the material for a rich interior life, is no guarantee that he or she will be any good in today’s workforce.

Workforce entrants, says Wagner, need what he calls “just in time” learning: the ability to find the latest information and apply it to a problem that may not have existed yesterday, and may be solved by someone else tomorrow.

“Timeless learning?” says Wagner. “At its worst, it’s Trivial Pursuit.”

But what about the traditional role of the academy—i.e., the liberal arts college that costs you \$45,000 a year—as a repository for knowledge that is valued an end in itself?⁵ Aside from the business connections provided by premium alumni networks, are these schools offering students any real-world training?

5 For an opposing view, read Stanley Fish’s *Save the World on Your Own Time* (Oxford University Press, 2008) in which he argues that the liberal arts are “like poetry because they make no claim to benefits beyond the pleasure of engaging in them.”

Wagner acknowledges the tension between workforce readiness and art-for-art's-sake. "A lot of people will ask me, 'Which war should we leave out?' I don't think it's a tradeoff. It's about depth, not breadth: about learning how to ask the right questions. The academy needs to be involved in the conversation."

Business is already there. "The new paradigm will require us to revise our assumption that education is received for 12 to 16 years in formal, lecture-type settings," says McNerney of Boeing. "It will instead reflect how people—starting in earliest childhood and continuing throughout their entire lives—will learn, unlearn, and relearn to succeed in a constantly evolving world."

Don't Blame the Teachers

"I haven't met anybody who became a new teacher who wanted to be a bad teacher," says Boeing's McNerney. "I think we have created an environment where they can't accomplish what their dream was."

Facts:

U.S. teachers are isolated from their peers In tests administered in 2003 by an international educational organization, Finland scored highest on math, science, and problem-solving.⁶ The United States scored 28th, just behind the Russian Federation and just in front of Portugal. In Finland, teachers spend 40 percent of their time in peer collaboration and consultation. In the United States, they spend 13 percent of their time that way. "Education is arguably the most isolated profession in modern work life," says Wagner. "And isolation is the enemy of innovation."

U.S. teachers are spending more time than ever teaching to standardized tests The 2001 No Child Left Behind law mandated statewide standardized tests for the entire public school system, with extra pressure on schools receiving Title I funds (typically schools with 40 percent or more students from low-income families) to make "adequate yearly progress" in those tests. Teaching to the test improves basic and remedial math and reading scores, but at the expense of interactive, problem-focused learning – the kind of learning that new workforce entrants will need.

⁶ Tony Wagner, *The Global Achievement Gap: Why Even Our Best Schools Don't Teach the New Survival Skills Our Children Need—And What We Can Do about It* (New York: Perseus Books, 2008), p. 152.



Jim McNerney, CEO of Boeing (left), participates in a panel discussion on workforce readiness at The Conference Board 2009 Annual Dinner (at right: Barry Salzberg, CEO of Deloitte, LLP).

We treasure what we measure

School testing has also been nourished by the culture built around advanced placement classes for college-bound teenagers, plus SAT and other college admissions tests and the massive preparation they can involve.

"Assessment drives instruction," says Wagner. "What gets measured is what gets learned." Traditionally, U.S. educators have measured the amount of material students have been able to memorize using multiple-choice questions: a testing system that admits no room for innovative thinking, problem-solving, or collaboration. And so increasingly, employers are finding that classroom scores have little bearing on workforce performance.

"At Vertex, we put a premium on effective, collaborative problem solving and decision making," says dinner attendee Jeff Westphal, president and CEO of this mid-market company. "Not only isn't this skill being taught in school, we find that exactly the opposite is being encouraged: individual accomplishment in competition with peers. And, there is precious little, if any, real work going on in school. For these reasons, we avoid academic superstars and prefer hiring individuals who have learned, in the real world, how to work with others effectively."

There is more evidence that the dean’s list is not necessarily a golden ticket:

- Male athletes, despite lower SAT scores and grades than non-athletes, and despite the fact that many of them are minorities or are from lower socioeconomic backgrounds, are more likely to out-earn their higher-testing peers.⁷
- When school superintendents and employers were asked to name the skill that best demonstrates creativity, school superintendents ranked problem solving first, while employers ranked problem identification first.⁸ This discrepancy bolsters the view that while schools teach students how to solve problems put before them, business requires workers who can identify the problems in the first place.

Some are starting to measure the “right” things

There are signs that other, more nuanced forms of assessment may be replacing the current ones:

- More and more selective colleges are now SAT-optional. Most recently, Smith College and Wake Forest University joined the growing list of colleges and universities—about a quarter of liberal arts colleges—that have made the SAT and some other standardized achievement tests optional for applicants. Studies from some of the early SAT-optional schools such as Bates College show no discernible difference in the achievement levels of students who submitted SAT scores and those who did not.⁹

7 James L. Shulman and William G. Bowen, *The Game of Life: College Sports and Educational Values* (Princeton, N.J.: Princeton University Press, 2001), cited by Malcolm Gladwell in “Getting In: The Social Logic of Ivy League Admissions,” *The New Yorker*, Oct. 10, 2005, <http://www.newyorker.com/archive/>

8 James Lichtenberg, Christopher Woock, Mary Wright, *Ready to Innovate: Are Educators and Executives Aligned on the Creative Readiness of the U.S. Workforce?* (Key Findings), The Conference Board, R-1424-08-KF, 2008.

9 William R. Hiss, “20 Years of Optional SATs at Bates,” Bates College, <http://www.bates.edu/x58835.xml>. Presented at the 60th annual meeting of the National Association for College Admissions Counseling, Milwaukee, Wisconsin, Oct. 1, 2004.

Educational Partnerships Take Flight at Boeing

“Somehow the government has to realize that the metrics are wrong, that partnerships—not mandates—are the answer,” says McNerney. He says that when primary school-age students are introduced to math and engineering topics in a “motivational environment, a third of them will grab it.” When education is just about theory and the students cannot see how to apply the learnings, that number falls to 9 percent.

Boeing has put money—and manpower—behind this statement, with programs such as:

- Space Camp to teach 100 secondary school teachers cutting-edge science
 - Mentoring programs linking Boeing engineers with student teams that build competitive robots
 - Engagement with community and technical colleges in the Seattle area to train employees and other students in new technologies
 - An annual fellowship program to bring professors from various disciplines into the company for eight weeks, where they learn how their disciplines translate into practical applications and help identify areas for possible improvement
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- New tests are being invented, and, occasionally, adopted that better reflect real-world skills. They include the Collegiate Learning Assessment (CLA), an open-ended 90-minute exam that tests core competencies for thinking and is being used at some prep schools; the cross-disciplinary PISA problem-solving test; and the 75-minute ISkills Test, developed by the Educational Testing Service, requiring students to do online research from which they develop a PowerPoint presentation.

And new initiatives and programs are addressing the multifarious issues of workforce readiness. Among the many:

- America’s Promise – The Alliance for Youth, founded in 1997 by Colin Powell, now has 300 cross-sector partners, including corporations, nonprofits, faith-based organizations, and advocacy groups all aiming to ensure “that all young people graduate from high school ready for college, work, and life.” One of the “five promises” that compose the organization’s mission statement is to make sure students learn “marketable skills through effective education.”

- Ready by 21, the main project of The Forum for Youth Investment, works through challenge grants and partnerships with public, private, and corporate funders to prepare young people for the future. Among its plans: “to usher in new public accountability for improved child and youth outcomes that is linked to real data.”
- At Harvard University, the Task Force on General Education reconfigured the requirements for the liberal arts degree so, in the words of its 2007 report, “to enable undergraduates to put all the learning they are doing at Harvard, outside as well as inside the classroom, in the context of the people they will be and the lives they will lead after college.”

Aspects of the proposal:

- new guidelines for determining which courses may be used for general education, allowing students more choice in finding ways to satisfy their requirements;
- wider adoption of innovative pedagogical techniques in general education;
- courses and throughout the curriculum; and
- an activity-based learning initiative to explore procedures for linking extracurricular activities to the classroom experience.

It’s not too late - if we get moving now

“What’s needed for the future of education?” asks Westphal of Vertex. “In my opinion, a 180-degree change in direction, from content-laden directives and compulsory busy work to elective, creative, real work that challenges young people to master effective collaboration.”

That means more than a lot of isolated, one-off programs; it means systemic change. In some areas, educators and corporate leaders are doing this now. Whether there will be enough of them—and they will be strong and focused enough—to maneuver the massive institution that is U.S. education through the narrow straits ahead . . . well, it’s too soon to say.

But it’s too late not to act

“We cannot take our foot off the pedal,” says Salzberg of Deloitte. “There needs to be some form of collaborative working relationship between business, academia, government . . . to speak out on the issue and to act.”

Wagner believes three things have to happen—and they all have to come from corporate leaders. “Number one, CEOs have to be clear about the urgency of preparing the workforce. Two, they need to lobby for new testing systems. And three, they need to fund research and development for schools that can do it right.”

“We need to get the message to the American people that this is an important and critical issue,” says Martin of Pitney Bowes, “and it’s one we better get motivated about, or we’re going to be left behind in the next decades.”

What Business Leaders Can Do

Representatives from Fortune 100 companies, public school teachers, and nonprofit community/education organization leaders agree: business leaders are key to solving the workforce readiness problem. They can:

- 1 Use their bully pulpit and speak with a unified voice to drive change in national policy and societal norms. Get businesses, and especially CEOs, behind this issue and change will come. It will take strong civic and business leadership to effect reform in an education system fraught with inertia.
- 2 Support change on the front lines—at the local and state levels where businesses are significant employers with the presence and access to directly engage with teachers, community groups, and educators, as well as legislators and policy makers.
- 3 Encourage employees to be individual agents of change within schools and school districts, and to be life-long learners themselves.

Caveats:

- The current focus is too scattered. Businesses must align themselves both internally and externally to deal effectively with workforce readiness. The business sector must speak with one voice and deliver one message to maximize impact and “move the needle.”
- Corporate philanthropy alone cannot improve workforce readiness. Truly collaborative long-term public/private partnerships that look at effecting systemic change will have the greatest impact. Just throwing money at the problem hasn’t worked in the past and won’t work in the future.
- Companies rarely leverage their greatest assets when supporting educational programs—their own expertise in core competencies. The old model of funding schools and scholarships is no longer enough. Corporations need to realize they bring a unique set of capabilities and expertise to the partnership table—something that no other sector has. It is important for corporations to share not just cash, but also other resources at least as valuable—time, talent, and experience.

Source: Charles Mitchell, Linda Barrington, *Investing in the Future – the Importance of Cross-Sector Partnerships in Improving Workforce Readiness*, The Conference Board, Executive Acton 258, 2008, p. 10.

Acknowledgments

The Conference Board 2009 Annual Dinner was held in New York on May 27, 2009. Thanks to Ron Williams, chairman and CEO of Aetna, Inc., who served as chair for the event. W. James McNerney, Jr., chairman, president, and CEO of The Boeing Company, was honored for his company's trailblazing efforts in workforce readiness, which was the theme and focus of the dinner. The Conference Board thanks McNerney, Murray Martin, Barry Salzberg, and Tony Wagner for their participation in the CEO dialogue on workforce readiness.

The Conference Board has embarked upon a major expansion of its Workforce Readiness Initiative—one that gained accolades for the groundbreaking research in The Conference Board's 2006 report *Are They Really Ready to Work?*¹⁰ For additional information on The Conference Board Workforce Readiness Initiative, please contact Mary Wright, program director, human capital, at mary.wright@conference-board.org

If you are interested in joining the conversation on this subject, apply for membership in The Conference Board Business & Education Council. Contact Anitha Vijayakumar, council coordinator, at 212-339-0492 or anitha.vijayakumar@conference-board.org

About the Author

Susan Stewart is a writer/editor at The Conference Board. In addition to her publications at The Conference Board, Stewart's work has appeared in the *New York Times* and many other publications.

¹⁰ Are They Really Ready to Work? (Report BED-06-Workforce) was written by Jill Casner-Lotto and Linda Barrington, and published by The Conference Board in October of 2006.

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