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## **Education Is Essential to Economic Recovery**

Although the latest U.S. employment numbers are trending positively, there remain deep and systemic issues that have made fuller economic recovery elusive in states across the US, New York included. Chief among these is the disconnect between the availability of skilled workers and the tens of thousands of good jobs waiting to be filled. Our understandably intense focus on restoring full employment in the current down-cycle economy has led some to relegate education and education reform to the back burner. But we do so at our peril. And New York is to be congratulated for formulating this effort to look in depth at our schools and come up with some solutions. The plain fact of the matter is that a redesigned and stronger educational system is essential to a sustainable economic recovery and making the US competitive. We do ourselves – and future generations – a disservice if we fail to acknowledge this critical relationship.

### **High School is no longer enough**

Recent statistics from the U.S. Department of Education indicate a significant increase in high school completion rates in states such as New York. That would have been great news more than 40 years ago when a high school diploma still was either a ticket to a middle-class lifestyle or meaningful preparation for postsecondary education. In 1970, nearly 75 percent of people with only a high school diploma were middle class. But that's ancient history in a world where the time between generations shrinks every year. In less than 10 years, fully two thirds of all middle-class jobs will require postsecondary education or training. Workers with only a high school diploma – including the 75 percent of community college students who fail to complete their associate's degrees – will have few opportunities to earn more than poverty wages.

According to [\*The College Payoff: Education, Occupations, Lifetime Earnings\*](#) by the Georgetown University Center on Education and the Workforce, the U.S. currently has 29 million middle-class jobs that require at least two years of postsecondary education or training – with an additional 14 million jobs coming online over the next 10 years. These current and future jobs span industries such as health care, information technology, business and professional services, and office and sales support. Many of these jobs, at companies like IBM, Verizon, Intel and others offer entry to lifetime careers, especially for the 30 percent of community college graduates who go on to complete their bachelor's degrees.

### **Connecting education to jobs**

It is clear that education is firmly linked to economic growth. But simply writing a blank check and funding education without reforming it is a big mistake. To achieve education performance results that are meaningful in today's economy, we need to commit to couple financial support with innovation and incentives for change and performance. We need to retool our school systems to enable businesses, educators and communities to collaborate on strategies for leveraging diminishing resources to the greatest advantage of our young people.

Two initiatives that have the potential to maximize educational performance and create solid economic value are Career and Technical Education (CTE), and a new approach to professional apprenticeships. Implementing these programs via deep collaborations across businesses and education systems, both K-12 and higher education, could refocus billions of dollars of current funding that is being poorly spent on innovative solutions to the challenges facing our young people in the 21<sup>st</sup> Century, and offer them a ticket to opportunity.

Today's Career and Technical Education programs replace what we used to call vocational education – now an outmoded model. Twenty-First Century CTE programs must emphasize public-private partnerships between educators and employers connected to real jobs, and ensure that school curricula are academically rigorous and economically relevant. Working together, educators and employers can structure course content and classroom experiences to create a seamless link between education and careers. One such partnership is the collaboration among the New York City Schools, The City University of New York, and IBM on New York's [Pathways in Technology Early College High School \(P-TECH\)](#) – a grades 9 through 14 school that confers both the high school diploma and an associate's degree in technology and insures that graduates are first in line for jobs. Now entering its second year, P-TECH is achieving exciting results that are replicable in any similar school, and scalable nationwide. The per pupil funding for P-TECH is not a nickel more than is spent on all other students. At P-TECH students in the 10th grade are already taking college courses. This past summer they took their first college course and the average grade was B-. Attendance at the school was over 95% and the 2/3 of the students who began with reading levels two years below grade level have already been brought up to grade level. Of course every student gets an IBM mentor, the curriculum was mapped to entry level skill requirements at IBM and the company has been closely involved in everything, from training teachers to assisting the principal. And 5 more schools on this model opened in Chicago last September. The core concepts of this initiative are embodied in the U.S. Department of Education's [Blueprint for Education Reform](#). This reform would refocus all of the funding for career and technical education from simply sending funds based on total number of pupils, and instead provide incentives for performance, link to labor market data, and engagement of business and higher education.

Adopting a new approach to professional apprenticeships enables us to link education to employment in another important way. In [Enterprising Pathways: Toward a National Plan of Action for Career and Technical Education](#), which I co-authored we suggest repurposing Federal College Work-Study funds (currently about \$1 billion that provides on-campus wages for nearly one million college students) to help pay salaries for off-campus jobs that are directly connected to the students' academic majors and intended careers. Replacing “cafeteria work” or work in the school library with meaningful professional apprenticeships paid for with this built-in funding source, these new-model work-study jobs could be in the public, private or non-profit sectors. But these jobs must be skill related and designed to build skills, not just provide funds to pay tuition; they can and should do both. Imagine the benefit if one million students a year had real meaningful and paid apprenticeships. The distinguishing characteristics of these jobs would be the opportunities they would offer for college students to learn relevant skills to advance their learning and careers. And co-incidentally connect to economic growth.

These two innovations alone would repurpose over two billion dollars in existing federal

funding, and benefit millions

We at IBM have a great stake in improvements in our schools. We have some of our world class research facilities in New York, our corporate headquarters here and a significant number of our US workforce here. Because of our deep connection to the state we have done a great deal to partner and collaborate with the state and its cities and especially its schools. We developed a new way to teach children to read using voice technology and have contributed it to schools across the state. It is very effective and will soon be cloud based for easier access. We developed a new site for science teachers to improve their instruction called Teachers Try Science offering access to the best lesson plans, video and collaboration tools. This is also free. We developed a new early childhood computer learning center for very young children called Kidsmart and contributed nearly 75,000 learning centers for free to schools around the world including many in New York State. And, we run science camps for young girls, electronic mentor programs and a Transition to Teaching program to help our employees, over 200,000 of which do regular community service, when they are exploring second career opportunities to see teaching as an important options. Companies like IBM do quite a lot but we can do more and the further replication of P TECH is high on that agenda

By working together to connect education to careers, educators and employers around the country, and here in New York will help millions of our young people prepare for both higher education and meaningful lifelong employment. The United States has a distinguished history of adapting educational requirements to evolving market demands to maintain a competitive and stable economy. We at IBM have done so in New York State where in partnership with SUNY we created a Nanotech center to grow science capability and innovation, and increase jobs. America has enacted historic initiatives that increased mandatory education from eighth grade to high school, and later enabled broad access to higher education via the G.I. Bill. Both were education initiatives that fueled unprecedented economic growth. Just as we did in the past, it is now time for us to invest our efforts and resources in new educational models that will grow the skills of our young people and strengthen America's global competitiveness.

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