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January 28, 2021

To U.S. Secretary of Education nominee Miguel Cardona and Secretary of Labor nominee Marty Walsh,

As you take office amid a global pandemic, I know you must be all too aware of the 11 million unemployed Americans and the 77 million students in US schools who have had their education interrupted in some way over the last 9 months.

These numbers show we have a lot of work ahead of us to recover our economy, get Americans back to work and prepare the future workforce for a rapidly evolving job market. We know this work can be done, and it can be done in a way that unlocks opportunity for *all* Americans, but it's going to require all of us to rethink the way we approach education, skills training and hiring in this country.

At IBM we've been doing this rethinking for a while now. Like many others in our sector, we often have trouble finding candidates with the right skills to work in high-tech roles. In 2016 we coined the term "new collar jobs" to refer to a surging number of careers that don't necessarily require a traditional bachelor's degree, but instead need a specific set of in-demand skills.

This focus on new collar jobs has allowed us to open the aperture when it comes to training and hiring for some of our most innovative and high-tech roles. IBM has now stripped bachelor's degree requirements for more than half of our US job openings, and we're continuously reevaluating our roles to prioritize skills over specific degrees.

While our work will continue, a successful reimagining of our nation's skills system is going to require collaboration and innovation in government and industry. IBM has a number of ideas for how we can work together to make the greatest impact for our nation's students and working adults:

Give Americans more pathways to careers

A bachelor's degree is not the only path to a good career in this country. The alternatives are less invested and understood. One of the underlying issues is that our education system has not modernized to meet the demands of the digital economy.

Creating new pathways to careers means investing in programs that provide indemand skills at scale, including "earn and learn" programs like apprenticeships, new hybrid education models, partnerships between community colleges and the private sector, and more.

Apprenticeships through the US Department of Labor help Americans earn a paycheck while building valuable skills. IBM established our own apprenticeship program a few years ago, which provides on-the-job training in areas from blockchain to cybersecurity and mainframes, and it grew nearly twice as fast as projected in its first year. These apprenticeships provide an opportunity for people of all backgrounds to earn while they learn, getting the skills to work in technology's fastest growing roles without taking on

student debt or taking time away from the workplace. The vast majority of these apprentices go on to be hired full time at IBM or other tech companies.

In 2019 IBM co-founded the CTA Apprenticeship Coalition to help other companies expand and scale high-tech apprenticeship programs, and nearly 40 companies are now working on adopting apprenticeship programs through the coalition. We see this as proof of scale - that, with more resources and funding from the Department of Labor and the Department of Education, high-skilled apprenticeships can be expanded across sectors and throughout the country to get more people into new collar careers.

Another proven approach is the P-TECH education model that IBM pioneered nearly a decade ago, which combines high school and community college education with mentorships and internships, all at no cost to the student. P-TECH launched with one school in 2011 in Brooklyn, New York, and is now in over 220 schools across 28 countries serving 150,000 students in the pipeline and supported by 600 business partners.

Programs like P-TECH empower American students with options. They are set up with the skills to enter the workforce right away, to continue their education by pursuing a bachelors or other degree, or to find some combination that works best for them.

These are just two examples of the growing number new collar pathways that we believe should grow and scale under the Biden administration.

Make federal student aid work better for everyone

The U.S. federal government provides over $130 billion annually in grants, loans, and other benefits to undergraduate students pursuing a bachelor's and other higher education degrees.

But in the U.S., the majority of the adult working age population – 67% – does not have a bachelor's degree. A large swath of Americans is unable to access federal student aid that is restricted to a single skills pathway in higher education.

The bumpy and obstacle-filled pathway of higher education interferes with progress to graduation. A recent report by Inside Higher Ed found that while 80% of students who start out at a community college say they intend to transfer and earn a bachelor's degree, fewer than a third of those students transfer within six years, and just one in six ends up earning a bachelor's degree.

One of the biggest obstacles in the education pathway to careers is the transfer of credits. More than 40% of students who transfer schools lose a substantial portion of their earned credits, and these obstacles tend to disproportionately affect Black, Hispanic and low-income students, according to the same report, driving further economic divide.

Information technology and other technical and career-oriented courses are among those credits that are often lost in the transfer process. For example, students taking courses in C++, or Java at San Diego City College (SDCC) can transfer those credits to San Diego State, but there is no agreement for any of the SDCC courses in cybersecurity, web services, Desktop support, or Game Programming.

IBM has been active in working with policymakers to expand career-oriented skills and training pathways for students and mid-career professionals. We believe the distribution

of federal student aid needs to be revamped by modernization of the Higher Education Act, which would entail:

- Reducing obstacles to transfer of credit so that students and workers can add to their education as their lives, careers, and resources permit without arbitrary interference from a registrar's office.
- Allowing part-time students and mid-career professionals to get Pell Grants for skills education, such as apprenticeships, internships, or community college classes.
- Allowing federal student loans to be used for apprenticeships, certificate programs, or other mid-career training, not just for bachelor's and other higher education degrees.
- Removing restrictions on student use of federal work-study funds for offcampus work experiences like internships at companies, where students can build career-relevant skills. Work study should not be confined to the school library or cafeteria.

Re-imagine the resume

Right now, there's no uniform way for those looking for jobs to prove their skills to potential employers beyond a resume or a degree. Creating pathways and opportunity for people to learn new skills is only part of the picture; we need to better match those people with employers looking for those in-demand skills.

The answer is a standard, national infrastructure that allows job seekers and employers to share, recognize, and verify skills.

Through our partnerships with academia, IBM is using blockchain technology to build a digital credentialing system that could serve as a template for a national skills platform. We can rapidly scale this system to help millions of Americans prove the valuable skills they've earned through these expanded education pathways, like apprenticeships, P-TECH, community college programs, coding bootcamps and more.

By expanding pathways to careers for more Americans, modernizing the way we distribute federal student aid, and opening the aperture when it comes to recruiting and hiring for high-skilled careers, we can accelerate economic recovery and ensure American leadership.

IBM is ready to work with your administration on advancing these priorities and to build our economy back stronger, creating a more equitable future for all.

- Obed Louissaint, Senior Vice President, Transformation and Culture, IBM