

# Closing the Job Skills Gap with New York Workers

Creating a 21<sup>st</sup> century workforce through smart investments in children

## SUMMARY

Finding the right worker for a job requiring special training or skills is not only challenging – it can reduce the productivity of everyone else in an office or worksite until the position is filled. Work can sometimes grind to a halt when, for example, an office IT system goes down, or the person who knows how to fix the assembly line retires.

If current education and labor market trends continue, by 2020 New York State will face a deficit of 350,000 workers for mid-level skill jobs – those requiring more than a high school diploma but less than a four-year degree.<sup>1</sup> A pipeline of skilled workers will be hard to create when 23% of New York high school students fail to graduate on time, and only 35% of our public school students graduate “college- and career-ready.”<sup>2</sup>

## A LOOMING SHORTAGE OF SKILLED WORKERS

There will be 3.3 million job vacancies in New York between 2010 and 2020 as a result of new jobs and openings from retirements and career changes.<sup>3</sup> While 15 percent of New Yorkers do not have a high school

**TO REVERSE THE SKILLS GAP**, ReadyNation urges a 3-point plan to build a qualified workforce in our state:

- 1 Expand high-quality early learning programs;
- 2 Continue to support New York’s Common Core Learning Standards (CCLS) and assessments; and
- 3 Expand access to innovative education models and multiple pathways to graduation.

diploma or equivalent, only nine percent of these job vacancies will be available for those who fall into this category.<sup>4</sup>

On the other hand, nearly seven out of every 10 vacancies will require some type of formal education beyond high school. This trend will result in 69% of all jobs in New York in 2020 requiring some postsecondary education – the 17<sup>th</sup> highest rate in the country. Unfortunately, only 58 percent of New Yorkers aged 25 or older have this level of education.<sup>5</sup>

Some of the professions that are likely to be hard hit by a skills gap are pharmacy technicians, software developers and physical therapists.<sup>6</sup> Among science, technology, engineering, and math (STEM) occupations, 95 percent will require postsecondary education by 2020.



## SOFT SKILLS ARE ALSO ESSENTIAL

The skills deficiencies go beyond those related to specific occupations. New York businesses are also concerned about the lack of increasingly important “soft skills” required for virtually any occupation in today’s world. Nationally, nine out of 10 executives said that soft skills like communication, collaboration and critical

## WHO WE ARE

ReadyNation is the nation’s preeminent business organization working to strengthen business and the economy through effective investments in children and youth.

thinking are important to support business expansion, but less than half of those executives rated their employees as above average in those skills.<sup>7</sup>

## OUR EDUCATION CRISIS

A full pipeline of skilled workers will be hard to create when 23% of New York high school students fail to graduate on time and only 35% of our public school students graduate “college- and career-ready.”<sup>8</sup> This includes 37% of both black and Hispanic students in New York that fail to graduate after four years, faring worse than the national average for students of these races.<sup>9</sup>

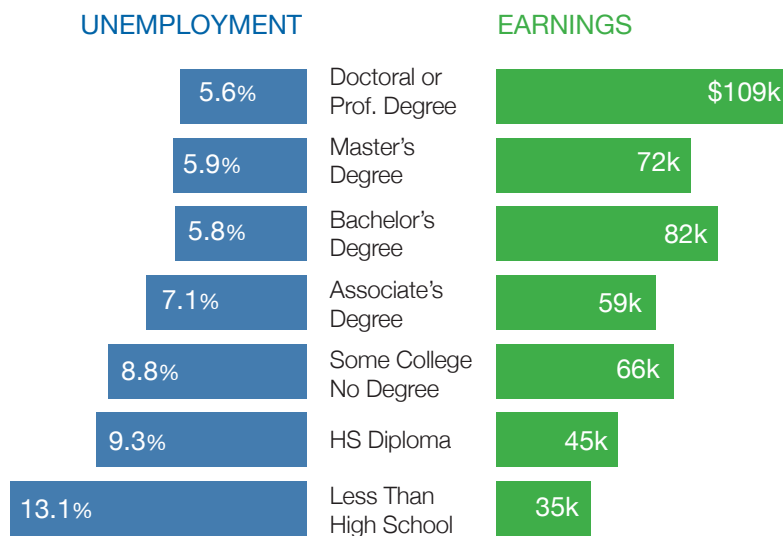
It is not surprising that we are not meeting these important milestones for students when, according to the Nation’s Report Card, only 35% of New York eighth graders are proficient in reading, 33% are proficient in math and 29% are proficient in science, setting the stage for failure for too many children.<sup>10</sup>

While New York ranks second in the nation in terms of state education spending, we also spend \$70 million on remedial education in the SUNY system alone.<sup>11</sup> Families are spending hard-earned money on educating their children—twice.

## A 3-POINT PLAN FOR BRINGING JOBS TO NEW YORK

Our state needs a long-term strategy to deal with these educational demands. If we want to guarantee a pool of the skilled workers businesses increasingly need in an innovation-driven global economy, we need to create the academic and social foundations for success starting before children enter school and continuing up until every student is college- and career-ready. We can bring new businesses to our state and ensure we have enough workers to fill our current deficits if we invest wisely in advancing education in New York.

## Unemployment and Earnings by Education Level in New York State



Note: Analysis of 2011, 2012 BLS data. Unemployment rates are for adults age 25 and up. Earnings are for ages 25 - 64.

Source: Chmura Analytics, 2013

**1. Early Learning:** The skills children develop in high-quality early learning programs are critical to developing both the hard and soft skills necessary to compete in a global economy. High-quality programs impact long-term outcomes including graduation and workforce productivity.

Research also shows that these programs help children begin developing critical pre-literacy and pre-math skills. Developing pre-math skills at an early age is particularly important, as research shows that children’s knowledge of mathematics in preschool predicts later school success – including reading achievement – in elementary and high school.<sup>12</sup> Children who participated in New Jersey’s Abbott Preschool Program, for example, were 3/4 of a year ahead in math and 2/3 of a year ahead in literacy compared to their peers not in the program when they reached the fourth and fifth grades.

High-quality programs can also impact longer-term outcomes including graduation and workforce productivity.

Children who participated in Michigan’s Great Start Readiness program were 35% more likely to graduate from high school than peers not in the program, while children in the Abecedarian early learning program in North Carolina were four times more likely to graduate from a four-year college and 42% more likely to be consistently employed by age 30.<sup>13</sup> Children who participated in Chicago’s Child-Parent Centers, which have served over 100,000 three- and four-year-olds, were 31% more likely than their non-participating peers to hold a job considered semi-skilled or higher.<sup>14</sup>

**2. P-12 Learning Standards:** New York’s rigorous P-12 Common Core Learning Standards (CCLS), combined with continued implementation of aligned state assessments, are already helping ensure that students develop the deeper learning skills required by today’s businesses. They reflect businesses’ needs for a highly-skilled workforce that has mastered core academic content and is able to think critically, solve complex problems and communicate effectively. The CCLS establish the content

## Tech Valley High – Albany

Tech Valley High School was “developed in partnership with business, organized labor, and government to be a resource for the region’s evolving technology ecosystem.” It currently enrolls 125 students from 26 of 46 eligible school districts. Students are selected by lottery; they include youth in the following categories—12% minority, 41% female, 28% free or reduced-price lunch, and 21% with disabilities.

The school has a STEM focus and a project-based learning environment. Several subjects are integrated and team-taught with a real world context. Over 150 partners from business and the high-tech community work with teachers to co-design, co-teach, and co-assess curriculum projects.

Results are impressive. Of four graduating classes, almost all students graduated with a Regents diploma (22% Advanced Regents diploma, 77% Regents diploma, 2% local diploma), all were accepted to college (some chose military or employment), 54% are attending four-year colleges, and nearly 39% pursued STEM studies or employment (compared to 7% nationally). All students leave with a digital portfolio of their learning, including documentation of the ability to collaborate and work in teams, innovation and creativity, critical thinking, tech and information literacy, and self-direction. In addition, Tech Valley High School trained over 330 educators in 2013-14.

Source: Tech Valley High School

and skills that children must learn at each grade level, but they do not tell teachers how to teach, nor do they specify a curriculum; these important decisions remain under local control.

Updated state assessments that are aligned to the standards will ensure that we are testing students’ abilities to think critically, use evidence from text and communicate accurately and effectively, rather than focus on low-level skills such as memorization and recall.

**3. Innovative Education Models and Multiple Pathways:** One of the best – and proven – ways to impact the skills gap is to equip high school students for success in postsecondary training and/or education and their future careers. Students need to understand how education is relevant to a career, know their options and what is expected in the workplace and have access to multiple pathways to graduation.

Innovative models and approaches, such as the proven Career Academies model,

are being implemented across New York and include rigorous academics, career-relevant instruction, support services and work-based learning experiences. Although some programs are stand-alone schools, most are pathways within larger comprehensive high schools. In a well-designed study of Career Academies across America, students were twice as likely as non-participants to be working in the computer, engineering and media technology sector eight years after

### “Not Your Father’s Voc Ed”

Today’s Career and Technical Education (CTE) is a revamped version of vocational education, with a focus less on job training and more on academic and technical abilities leading to careers that require at least some post-secondary education.

CTE schools align their curriculum with projected employer demand. They serve students who, on average, enter high school less likely to graduate. Black and Latino students who choose to participate in CTE, particularly

males, have much higher graduation rates at CTE schools.

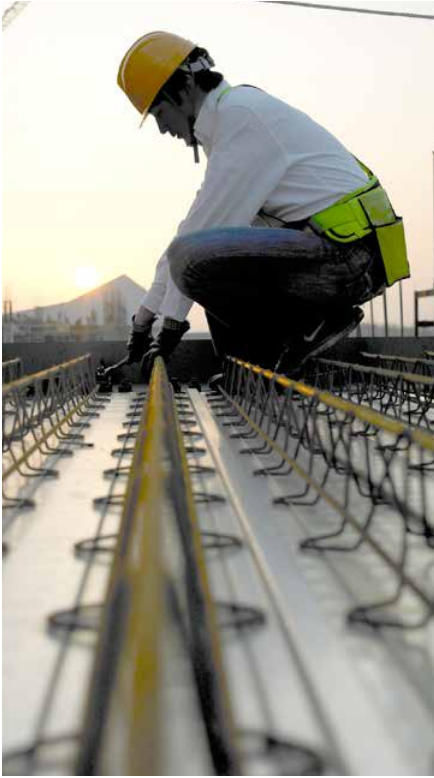
Unfortunately, the existing number of CTE schools does not meet students’ demand. At least 800 students eligible for attendance in New York City CTE schools (and who ranked CTE as a priority placement) could not attend because of a shortage of programs (2009 cohort).

Recently introduced legislation would provide students in traditional schools an opportunity to participate

in career-focused education classes leading to a Regents diploma with a CTE focus. This pathway would help students outside of CTE-specific schools to advance to post-secondary educational opportunities, allowing them to pursue the necessary degrees and/or certification to become members of the technical workforce.

Ultimately, an increased investment in CTE that focuses on college- and career-readiness will help close the skills gap in New York State.

Source: Community Service Society of New York



graduation, thus helping to increase the supply of STEM workers.<sup>15</sup> Young people who went through Career Academies also earned more and were more productive than those not in the program.<sup>16</sup>

With the elimination of New York State's local diploma, it is essential that multiple pathways exist for those students who require an alternative option to succeed in school.

## THE BOTTOM LINE

The future of New York's economy depends upon the caliber of our workforce. As we continue the debate on meaningful education reform, the conversation must include promising and proven evidence-based education approaches and college-and-career-readiness standards that develop and assess skills in our students

that businesses expect – and need – from their workforce. New York business leaders are calling for high-quality early learning, continued implementation of New York's rigorous standards and aligned assessments, and greater access to innovative high school models and multiple pathways to graduation in order to better equip young people for success in both postsecondary education and their future careers. That is how we will build a prosperous future in New York.

## ENDNOTES

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ReadyNation is a membership organization of business leaders that operates under the umbrella of the non-profit Council For A Strong America.

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