

## **P-TECH Background**

P-TECH, co-developed by IBM, is a new approach to education that blends high school, community college and workplace skills in one. These innovative public schools span grades 9 to 14. Within six-years, students graduate with their high school diplomas and no-cost associate degrees in a STEM discipline, along with the skills and knowledge they need to continue their studies or step into well paying, high potential jobs.

Our nation's community college completion rates are abysmally low, with only 20% of US students enrolled in a community college completing in three years. Graduation rates among low-income students are significantly lower. A 2015 University of Pennsylvania study found that the percentage of students from the poorest families earning college degrees barely moved in over 40 years – increasing only from 6 percent to 9 percent. Only 6 percent of college graduates from low-income, minority urban schools completed a STEM degree within six years, according to the National Student Clearinghouse.

P-TECH helps close the achievement gap among underserved youth, many first generation college students from low-income families, in rural, suburban, and urban areas. The schools also map workplace skills into how the curriculum is taught, with a focus on fast-growing industries such as cybersecurity, health IT, and mobile programming. The schools, which are open enrollment, operates within existing education budgets.

The model has spread rapidly, with governors, education leaders, and heads of state recognizing this new approach to education that better prepares young people for college and provides new pathways to “new collar” careers – positions in some of the nation's fastest growing industries.

Policy makers can help prepare more students for college and careers by making programs like P-TECH the rule versus the exception in public education. This past summer, the U.S. House of Representatives voted to reauthorize bipartisan legislation (Perkins Act) that aligns the nation's career and technical education with successful school designs such as P-TECH, connecting high schools with college and helps close the growing skills gap. Once the legislation passes the Senate and gets signed into law, this will result in specific achievement gains.

### **P-TECH expands globally**

- In just six years since it launched, P-TECH is today active in 70 schools across six U.S. states, Australia, and Morocco, serving tens of thousands of U.S. students. By 2018, there will soon be 100 schools around the globe.
- More than 430 large and small companies are partnering with schools across a wide range of sectors, including health IT, advanced manufacturing, and energy technology. Business partners include SAP, Global Foundries, Johns Hopkins University, and Kaiser Permanente.
- IBM, which provides thought leadership and training across the P-TECH network,

created a free website ([www.ptech.org](http://www.ptech.org)) with tools and case studies to help school districts, colleges, and businesses establish new P-TECH schools. IBM also offers companies and schools free access to its MentorPlace website to help mentors and students effectively connect school to career.

Drawing students from economically disadvantaged communities, P-TECH schools are seeing strong levels of achievement:

- P-TECH schools in Crown Heights, Brooklyn and Chicago’s South Side have graduated 92 students. More than half of these graduates completed the program early (some received their two-year college degrees before their high school diplomas).
  - P-TECH Brooklyn’s first cohort, a majority of whom are low-income black or Hispanic students, achieved a graduation rate that is over four times the U.S. on-time average for all community college students.
  - Many graduates go on to pursue their bachelor's degrees while some have taken positions at IBM in New Collar roles ranging from digital design to data analytics.
- At a P-TECH school in Newburgh, NY (among the state’s centers of poverty and violence), more than one-third of the first class is on track to graduate two years early.
- At a P-TECH school in Norwalk, CT, 18% of the school’s first cohort is on track to graduate two years early.
- At 16 P-TECH schools in New York state, 85% of students earned college credits and one-third completed two or more college courses.

## **Fast Facts – P-TECH Schools**

### **P-TECH Schools in New York State**

New York state is front and center in the growth of P-TECH schools. In 2013, [New York Governor Cuomo](#) announced a major statewide initiative –NYS P-TECH –a partnership among the Governor, NYS Education Department, State University of NY, and the Business Council of NYS. Schools launched in every economic region across a range of industries, including advanced manufacturing, IT, health, civil engineering, and agriculture. The first 16 schools opened in the fall of 2014. The 37 total P-TECH schools across New York serve an estimated 12,000 students statewide at full enrollment with a community of more than 430 local employers. The next round of P-TECH schools will be selected statewide in response to an RFP due in mid-October 2017.

### **Student Profile (for the first 16 New York P-TECH schools)**

- Attendance rates average 93%
- 66% free and reduced meals eligible
- 75%+ meet one or more at-risk factors
- 58% students of color; 64% male, 35% female

## **Achievements**

- At the first 16 P-TECH schools in the state, 85% of students earned college credits and one-third completed two or more college courses, after only two years. The pass rate for college courses exceed 90%.
- At 24 P-TECH schools, students have already taken 170 credit-bearing college courses.

*[Source: P-TECH schools in New York, New York State P-TECH Leadership Council]*

## **P-TECH: Brooklyn, New York**

In 2011, P-TECH Brooklyn became the first P-TECH school to launch. Graduates earn an associate degree in electromechanical engineering or computer systems technology.

## **Student Profile**

- 627 students
- Over 70% of students qualify for free or reduced lunch
- 95% Black or Hispanic; 75% male, 25% female
- 18% of students have Individualized Education Programs (IEPs)
- Average attendance rate is above 90%

## **Achievements**

- 80 students graduated within 6 years or less (as few as 3.5 years) with both their high school and associate STEM degrees.
  - The first class achieved a graduation rate (53%) that is over four times the national on-time average for all community college students, which stands at 13%.
- 11 graduates started their careers at IBM, ranging from associate analyst to digital design developer.
- 384 students completed college courses through February 2017. Students are placed into credit-bearing college courses when ready and do not take remedial courses. The school maps career readiness skills required for both college and career preparation, including workplace learning, mentoring and internships.
- 100 percent of the first cohort completed high school.
- 80 percent of students from the first cohort completed paid internships, with a majority at IBM. More than 130 students from the first and second cohorts completed paid internships.

*[Source: P-TECH]*

## **Sarah E. Goode STEM Academy: Chicago, Illinois**

Launched in 2012, Sarah E. Goode STEM Academy is a partnership among the Chicago Public Schools, Richard J. Daley College of the City Colleges of Chicago and IBM. The school gives students the option to earn significant college credit and secure their associate STEM degrees in computer science, web development or networking technology.

### **Student Profile**

- 903 students
- 86% of students qualify for free or reduced lunch
- 60% Black, 39% Hispanic, 1% White/other; est. 50% male, 50% female
- 16% of students have an Individualized Education Plan (IEP)
- 93% average attendance (compared to 90% district average)

### **Achievements**

- 92% Freshman On-Track rate 2016-2017 (compared to 84% District-wide). Freshmen classified as “on-track” (based on attendance and GPA) are 4 times as likely to graduate from high school and have a higher likelihood of persisting in college.
- 12 students earned their associate tech degrees. An additional 25 students are on track to receive their associate degrees in 2018.
- Goode students pass college courses at a rate >90% (compared to a national community college average pass rate of 20%); Dual credit pass rate: 98%
- 190 students were enrolled in college courses in the spring of 2017
- 100 Goode students have completed internships at Chicago tech companies
- Goode is ranked a 1+ school on school report card (SQRP) as of SY 2016, the highest ranking issued by Chicago Public Schools.

*[Source: Sarah E. Goode STEM Academy]*

### **Excelsior Academy: Newburgh, New York**

Opened in 2013, Excelsior Academy is a partnership among the Newburgh Enlarged City School District, the State University of New York at Orange and IBM. Graduates earn an associate degree in cyber security or computer networking.

### **Student Profile**

- 196 students
- 76% of students qualify for free or reduced lunch
- 53% Hispanic, 32% Black, 13% White, 2% Other; 55% male; 45% female
- 10% of students have Individualized Education Programs (IEPs)
- 94% attendance rate (compared to 88% district average)

### **Achievements**

- More than 30% of the first class is on track to graduate two years early
- 85% of the first class have met college-ready benchmarks, enrolled in college coursework

*[Source: Excelsior Academy]*

### **Norwalk Early College Academy (NECA): Norwalk, Connecticut**

Opened in 2014, NECA was developed in collaboration among the Norwalk Public Schools, Norwalk Community College and IBM. Graduates earn an associate degree in software engineering or mobile programming.

**Student Profile**

- 319 students
- 45% Hispanic, 29% Black, 20% White, 6% Asian; 58% male; 42% female

**Achievements**

- 50% of students achieved honors in the 2015-2016 academic year
- NECA students achieved 91% pass rate for college courses, with 36% of students enrolled in college courses in 2016-2017
- 18% of the first class is on track to graduate two years early
- 30% of the first class completed paid internships at IBM in the summer of 2017

*[Source: NECA]*