mdrc
BUILDING KNOWLEDGE TO IMPROVE SOCIAL POLICY

DECEMBER 2018

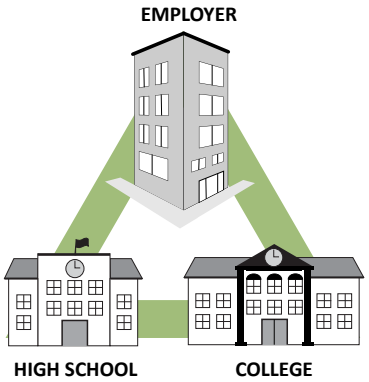
AN OVERVIEW OF THE

NYC P-TECH GRADES 9-14 MODEL

What Is the NYC P-TECH Grades 9-14 School Model?

The NYC P-TECH Grades 9-14 schools are early college and career high schools that are part of a public education reform movement in the United States and across the globe. They aim to prepare students for college and career — not one or the other — which is a different approach to contemporary high school reform than many others take. The schools neither screen students based on academic ability nor require interviews for entry. These schools strive to lower many of the barriers that deter students underrepresented in higher education and STEM (science, technology, engineering, and math) fields from pursuing these options. A hallmark of the whole-school model is the partnership among high schools, colleges, and industry collaborators: Students take an integrated sequence of high school and college courses with the goal of completing both high school and college, while simultaneously being exposed to hands-on work experiences. The partnership is designed to put students on the path to a college credential in a high-demand field connected to the school's career focus. Starting in high school, partner colleges offer students the opportunity to earn credits that count toward an associate's degree in a STEM discipline — at no cost to the student — while also being exposed to careers in these fields.

A hallmark of the model is the partnership among high schools, colleges, and industry collaborators.

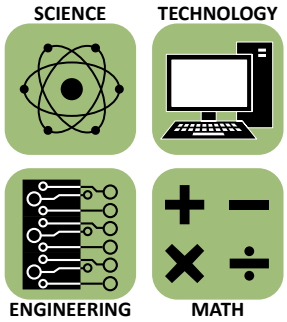


PARTNERSHIPS

Each high school has a college partner and at least one employer partner.

Each school focuses on science, technology, engineering, or math where there is a strong demand for workers of every level of experience.

STEM FOCUS

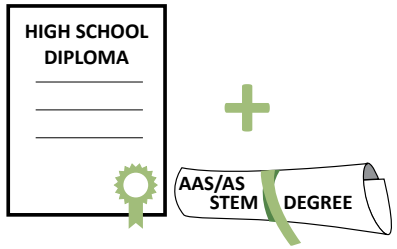


WORK-BASED LEARNING

Students participate in a career-development sequence in alignment with the academic curriculum that includes professional mentoring, job shadowing, speaker panels, internships, and more.

Students earn high school diplomas in four years and industry-aligned, cost-free associate's degrees within six years.

CREDENTIALS



AN INTEGRATED, SIX-YEAR PROGRESSION

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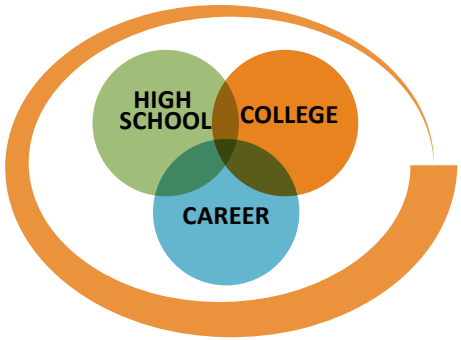


The model starts in the ninth grade and integrates up to two years of college and 60 college credits at no cost to students.

"Regents" are New York State standardized exams in core subjects required to graduate from high school.

"CTE" is career and technical education.

"General education" college courses are non-major-specific subjects such as math or English.

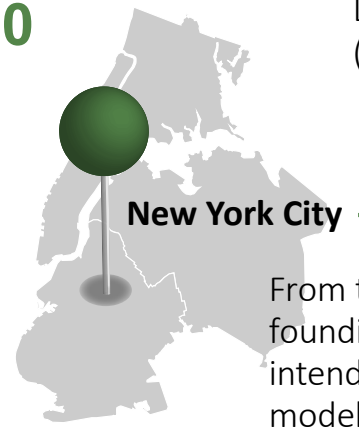
	HIGH SCHOOL	COLLEGE	CAREER
YEAR 1	Regents and CTE	College visits/prep	**Exposure** Site visit, speakers
YEAR 2	Regents and CTE	First college course	**Awareness** Professional mentoring
YEAR 3	Regents and CTE	General education	**Exploration** Job shadowing
YEAR 4	Regents and CTE	General education	**Training** Paid, skills-based internships, apprenticeships
YEAR 5	College/ career transition support and seminars	Courses for major	
YEAR 6		Courses for major	

SOURCE: New York City Department of Education, Office of Postsecondary Readiness.

The Importance of Evaluating the Model

2010

The NYC P-TECH Grades 9-14 model began planning in 2010 in New York City as a part of a public-private partnership among the New York City Department of Education (NYC DOE), the City University of New York (CUNY), and IBM.



From the start, the founding partners intended to expand the model to a larger scale. Based on the promise of the first P-TECH school, NYC DOE began replicating the model, leading to the eventual implementation of seven New York City-based schools by 2015 (the last two of which were launched as part of a strategy to expand the model in New York State with state funding).

2011 P-TECH, BROOKLYN

2013 ENERGY TECH, QUEENS

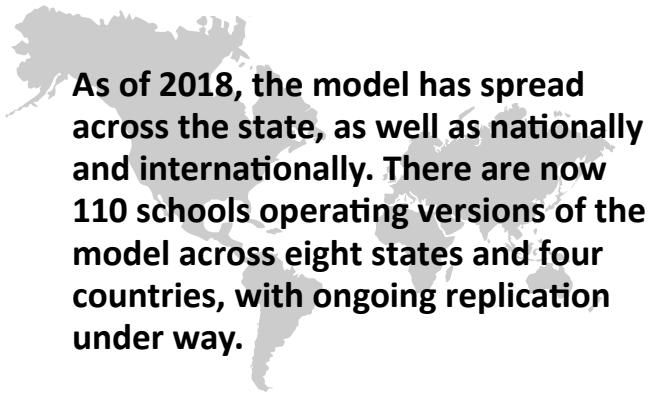
HERO, BRONX

2014 INWOOD, MANHATTAN

MECA, MANHATTAN

B-TECH, QUEENS

2015 CITY POLY, BROOKLYN



As of 2018, the model has spread across the state, as well as nationally and internationally. There are now 110 schools operating versions of the model across eight states and four countries, with ongoing replication under way.

Evaluation

While early results on student achievement and completion are promising, a rigorous evaluation is necessary to identify the effects on student outcomes associated with this particular model. The earliest P-TECH 9-14 schools have only now been in operation long enough to provide enough data for a formal evaluation, and New York City's lottery-like process for accepting students to the schools provides an opportunity to use a rigorous experimental design to examine their effects.

The model has deep roots in a number of other models of success for which rigorous evidence already exists, including career academies,[1] early college high schools,[2] dual-enrollment programs,[3] and small schools.[4] The P-TECH model has the potential to yield effects similar to or even stronger than those produced by these models, because it not only combines the core components of these approaches but adds additional proven or promising practices such as industry involvement.

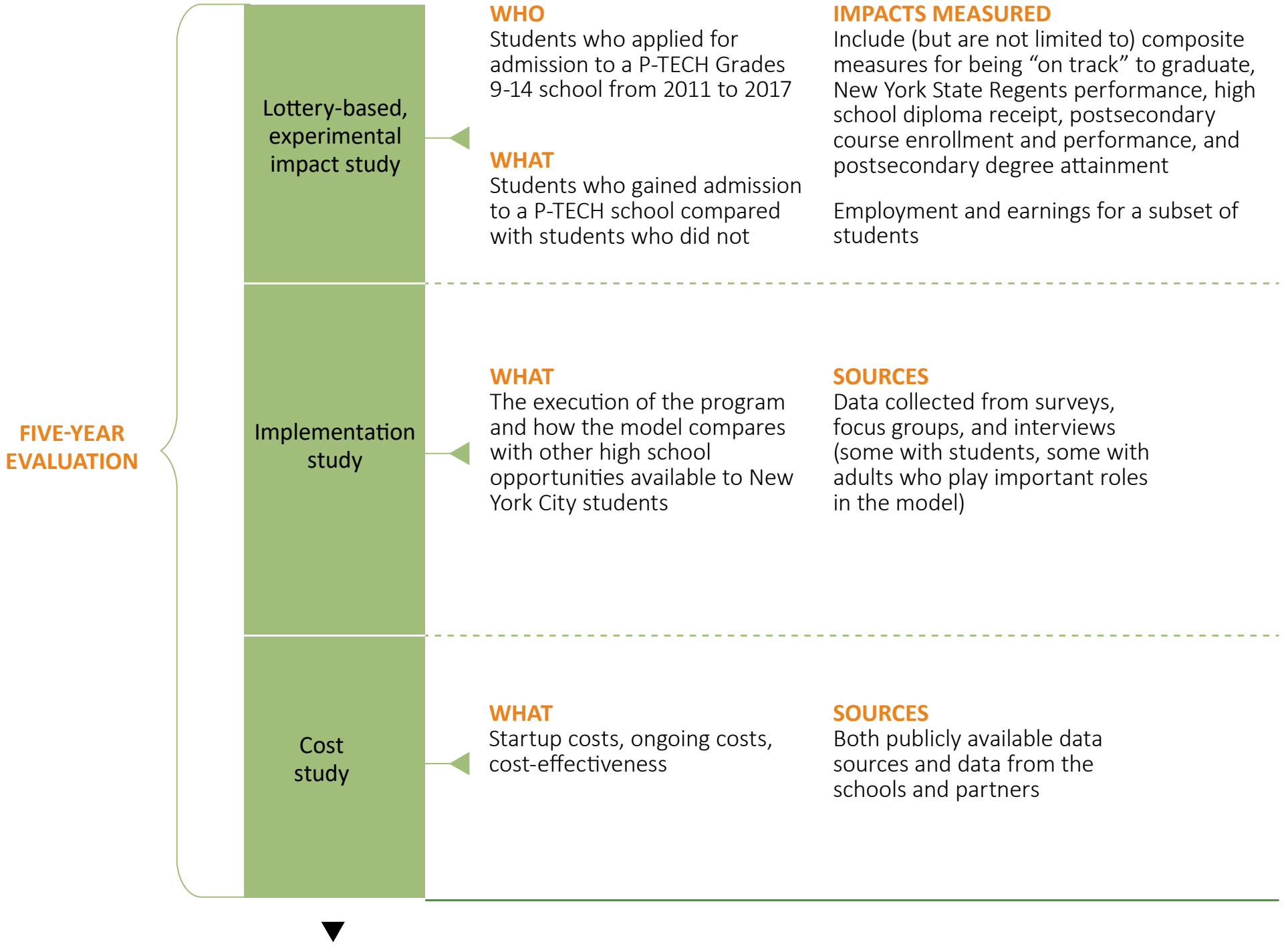
The MDRC Evaluation

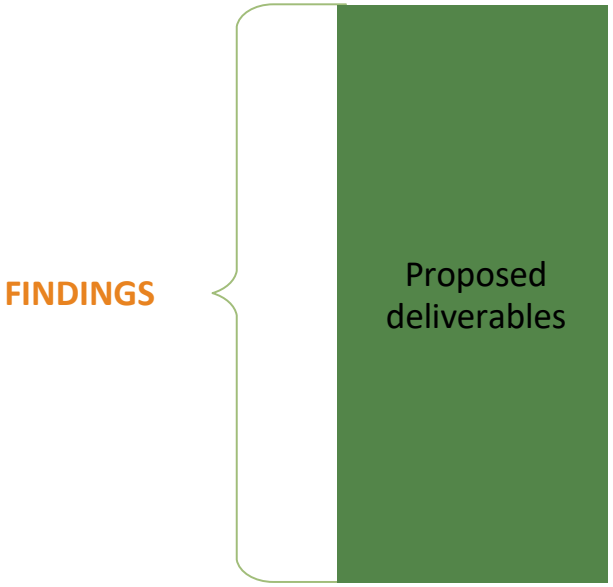
MDRC will be conducting the first rigorous evaluation of the first seven New York City P-TECH Grades 9-14 schools. (Two new schools have opened since the evaluation started. They will not be part of the study.)

SEVEN NEW YORK CITY P-TECH 9-14 SCHOOLS FOR THIS STUDY

1 P-TECH High School (Pathways in Technology Early College High School)
2 Energy Tech High School
3 HERO High School (Health, Education and Research Occupations High School)
4 Inwood Early College for Health and Information Technologies
5 MECA High School (Manhattan Early College School for Advertising)
6 B-TECH High School (Business Technology Early College High School)
7 City Polytechnic High School of Engineering, Architecture, and Technology

High School	CUNY Partner College	Anchor Employer Partner(s)
1 P-TECH	New York City College of Technology	IBM
2 Energy Tech	LaGuardia Community College	Con Edison, National Grid
3 HERO	Hostos Community College	Montefiore Medical Center
4 Inwood	Bronx Community College, Guttman Community College	Microsoft, New York Presbyterian Hospital
5 MECA	Borough of Manhattan Community College	American Association of Advertising Agencies (4A's)
6 B-TECH	Queensborough Community College	SAP
7 City Poly	New York City College of Technology	Metropolitan Transportation Authority


FIVE-YEAR EVALUATION
Lottery-based, experimental impact study
WHO
Students who applied for admission to a P-TECH Grades 9-14 school from 2011 to 2017
WHAT
Students who gained admission to a P-TECH school compared with students who did not
IMPACTS MEASURED
Include (but are not limited to) composite measures for being "on track" to graduate, New York State Regents performance, high school diploma receipt, postsecondary course enrollment and performance, and postsecondary degree attainment
Employment and earnings for a subset of students
Implementation study
WHAT
The execution of the program and how the model compares with other high school opportunities available to New York City students
SOURCES
Data collected from surveys, focus groups, and interviews (some with students, some with adults who play important roles in the model)
Cost study
WHAT
Startup costs, ongoing costs, cost-effectiveness
SOURCES
Both publicly available data sources and data from the schools and partners



ESTIMATED TIMELINE

2019
- Brief with interim impact findings

2020
- Brief with cost study findings

2022
- Journal article on findings
- Final report with full lottery analysis of high school outcomes, postsecondary outcomes, early employment outcomes, and final cost study and implementation findings

NOTES

1. James J. Kemple, with Cynthia Willner, *Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood* (New York: MDRC, 2008).

2. SERVECenter, *A Better 9th Grade: Early Results from an Experimental Study of the Early College High School Model* (Greensboro, NC: SERVE Center, 2010); Andrea Berger, Lori Turk-Bicakci, Michael Garet, Mengli Song, Joel Knudson, Clarisse Haxton, Kristina Zeiser, Gur Hoshen, Jennifer Ford, Jennifer Stephan, Kaeli Keating, and Lauren Cassidy, *Early College, Early Success: Early College High School Initiative Impact Study* (Washington, DC: American Institutes for Research, 2013); Julie A. Edmunds, Lawrence Bernstein, Fatih Unlu, Elizabeth Glennie, John Willse, Arthur Smith, and Nina Arshavsky, "Expanding the Start of the College Pipeline: Ninth-Grade Findings from an Experimental Study of the Impact of the Early College High School Model" (*Journal of Research on Educational Effectiveness* 5, 2: 136-159, 2012).

3. Olga Rodríguez, Katherine L. Hughes, and Clive Belfield, "Bridging College and Careers: Using Dual Enrollment to Enhance Career and Technical Education Pathways," an NCPR Working Paper (New York: National Center for Postsecondary Research, 2012); Melinda Mechur Karp, Juan Carlos Calcagno, Katherine L. Hughes, Dong Wook Jeong, and Thomas Bailey, *The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States* (New York: Community College Research Center, Columbia University, 2007).

4. Howard S. Bloom and Rebecca Unterman, "Can Small Schools of Choice Improve Academic Outcomes for Students?" (*Journal of Policy Analysis and Management* 33, 2: 290-319, 2014).

Founding partners: NYC Department of Education, CUNY, and IBM.

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