

Supporting Career and Technical Education in Peoria and Pittsburgh





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Since 2009, the American Federation of Teachers Innovation Fund, a project within the AFT Education Foundation, has made more than 80 investments across the country to local union affiliates, with the purpose of identifying, nurturing and promoting union-led innovations in public education. The fund's work aligns with the AFT's four pillars of powerful and purposeful public education: promoting children's well-being, supporting powerful learning, building teacher capacity and fostering cultures of collaboration.

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AFT Innovation Fund: Supporting Career and Technical Education in Peoria and Pittsburgh

By Richard Kazis

Between 2015 and 2018, the AFT Innovation Fund supported innovative career and technical education (CTE) efforts in four communities: Miami, Peoria, Pittsburgh and San Francisco. This report focuses on the priorities, activities and outcomes achieved in two of those communities: Pittsburgh and Peoria. These two communities used three years of grant funding to the local teachers unions to launch, strengthen and build out two very different approaches to modernizing high school CTE efforts. There is much to learn from each community—about the power of collaboration and partnership, of combining top-down and bottom-up innovation, and the role of leadership. In the current environment, with public and policymaker interest in career preparation and experiential learning in high school still cresting, the AFT believes that the stories of CTE modernization in Peoria and Pittsburgh can be instructive for other communities as they think about how best to serve diverse student populations so that high school can reduce rather than exacerbate education inequities.



A fter several decades of decline beginning in the 1980s, high school-based career and technical education has been making a comeback.¹ Traditional blue-collar vocational programs fell out of favor with policymakers and families alike as the industries they served shed jobs and capacity. Reductions in state funding coupled with state high school graduation requirements steadily squeezed vocational course-taking.² Between 1990 and 2009, the number of CTE credits earned by U.S. high school students dropped by 14 percent.³

More recently, though, the pendulum has been swinging back. The cost of college has outpaced inflation, driving more parents and students to look for routes to good careers that might not require a four-year degree—or tens of thousands of dollars in student debt. At the same time, career exploration and planning, hands-on experiential learning in technologyrich settings, and learning to work in teams on complex long-term projects are pedagogical approaches that have become more popular as students and parents reassess their value in the labor market. Moreover, a decade of research on education and economic outcomes for CTE concentrators has bolstered the new enthusiasm for a revamped, modernized CTE. For students interested in fields such as information technology, engineering technology, digital media, healthcare, food preparation, entrepreneurship, public service and even manufacturing, there is growing consensus that rigorous career and technical education can be a valuable gateway to postsecondary credentials and experience-and to good careers. According to the research organizations MDRC and Results for America, multiple quasi-experimental studies have found associations between CTE course participation and positive student outcomes that include increased high school graduation rates and higher wages, particularly

among low-income students, young men, and students with disabilities.⁴ Outcomes would probably be even stronger were students better able to obtain information on program quality and if low completion rates for students in CTE programs were improved.⁵

The American Federation of Teachers, which represents high school career and technical education teachers across the country, has been an active contributor to the resurgence of modern career and vocational education. During much of the past 20 years, and particularly the last decade, the AFT has advocated for greater attention to CTE through its policy and practice, efforts to influence public opinion, and promotion of innovative practice at the secondary school level.

The AFT supported reauthorization of the federal Perkins Act in 2006 and then geared up for another big push in advance of the act's expiration in 2012. In 2013, the AFT and the Albert Shanker Institute co-sponsored a conference on Fulfilling the Promise of Quality Education for All: 21st Century Career and Technical Education, attended by national policymakers, educators, researchers and advocates for effective CTE programs. The following year, the union published a national



survey of its members who were career and technical education teachers. The membership also passed a formal resolution in support of advocacy on behalf of new CTE pathways nationally.⁶ The AFT convenes a national CTE task force comprised of local and state union affiliates to share information and promote CTE in their school districts.

On the ground, CTE school reform in New York City helped inform the AFT CTE efforts. Twentyseven new CTE schools opened in New York City between 2003 and 2013, offering handson training in everything from finance and web design to aviation, transit electronics and television and film production.7 AFT President Randi Weingarten and then-President of the IBM Foundation Stanley Litow co-authored op-eds on the potential of 21st-century career education, with IBM's STEM-focused P-TECH school model that linked high schools, community colleges and tech employers. According to Weingarten, "Today's career and technical education is a promising pathway that engages kids with real-world training and academic content and leads to further educational opportunities for 21st-century jobs. But the only way CTE will be a pipeline for good jobs is if the business community and government are real partners at the table with schools. That's what's happening now in New York."8

In 2015, the AFT Innovation Fund invested in a multiyear project supporting further union engagement in CTE work in collaboration with school districts. The Innovation Fund was created in 2009 to invest in local and state union affiliate efforts to identify, nurture and promote unionled innovations in public education. Promising Pathways, the name of the Fund's CTE initiative, engaged locals in four communities, on both coasts and in the older industrial heartland. Funding decisions were made based on existing CTE efforts and leadership: All had some robust programs as well as effective union leadership as well as union and school district collaboration. The United Educators of San Francisco and the San Francisco Unified School District focused their efforts on a partnership to transform middle school computer science from an elective offered only at two schools, reaching less than 1 percent of the district's middle schoolers to courses at 21 schools. This resulted in exposing nearly all students in grades 6-8 to computer science fundamentals and algorithmic thinking. In Miami, the United Teachers of Dade, the United Faculty of Miami Dade College and the college partnered to improve outcomes for students in four highneeds high schools in the city, focusing on 100 percent graduation at all the schools. In the process, students took postsecondary technology and design courses that resulted in 103 earned industry certifications.

The other two partnerships, in Pittsburgh and Peoria, Ill., are the subject of this report. Between 2016 and 2018, the AFT Innovation Fund supported union involvement in each community in CTE expansion and modernization. Each city received three years of funding, mostly for staffing, equipment, marketing and outreach, and teacher stipends for additional tasks and activities. The grants were implemented differently in each community; but they were foundational to the partnership efforts to inject new energy into their respective CTE programming.

In each community, CTE modernization had positive impacts on students and parents, teachers and their union, employers and civic leaders. New relationships were built; existing relationships deepened. In each, as is documented below, CTE enrollments, completions, and certifications increased, as did the visibility of CTE programming and opportunities in the community—among students and their families, employers, and governmental and nonprofit civic leaders.

In Pittsburgh, new programs were created and there was a new emphasis on curricular

redesign that encouraged more industryrecognized certifications, elevating CTE's place in the community. In Peoria, all of this was achieved, in addition to the groundwork that was laid for a robust regional approach to career pathways. This approach emphasized building out internship experiences for students and partnering across many districts and with the local community college.

The following pages summarize the origins, grant activities, and the ongoing impact of these efforts in each community. No claims are made for replicability; nor is this an evaluation that quantifies return on investment or long-term student outcomes. That kind of data collection and reporting is still underdeveloped in these and other districts. However, this retrospective look at the similarities and variations in each community's approach to improving its CTE programs will be instructive and encouraging to other communities and their key stakeholders, guiding their own efforts in this arena.

In both Peoria and Pittsburgh, the grants created the conditions for successful outcomes by enabling them to build capacity, turn existing plans into action, catalyzing additional programming, and delivering several other internal and external benefits. The work, in both locations, points to the importance of pathways that:

- Link high schools and local community colleges;
- Create strong engagement of employers;
- Emphasize credentials and credits that can increase student momentum to either community college or employment in a good job; and
- Commit to equitable access and progress in CTE for students from traditionally underserved populations.



Pittsburgh: Career and Technical Education Expansion and Upgrading

Origins: Context for AFT Innovation Fund grant

Like districts in many industrial cities around the country, Pittsburgh Public Schools (PPS) offered significant vocational education through most of the 20th century. The Connelley Trade School, for example, built in 1931, educated 1,800 students in its late 1930s heyday. As the Rust Belt economy contracted, the impact was felt across the city and its region, leaving the CTE schools and programs reeling. The population declined dramatically; pipelines into the workforce were disrupted and abandoned. The Board of Education closed Connelley in 2004. But, as Pittsburgh's economy adjusted and grew again, the idea of reinvesting in CTE worked its way back onto the agenda. During his campaign for mayor in 2013, Bill Peduto took up the cause, calling for a "Pittsburgh Connelley for the 21st century." In his first year as mayor, Peduto appointed a task force on how the city administration and the PPS could partner more effectively. Ideas about internships and a more strategic investment in summer jobs for local youth were elevated. Nina Esposito-Visgitis, president of the Pittsburgh Federation of Teachers, or PFT (and a Pittsburgh-area native with 26 teachers on one side of her family and 22 on the other), was appointed to the task force. Although the task orce did not specifically focus on CTE, it did emphasize internships and summer jobs—connecting to the mayor's priority on public safety and the need to strengthen and increase diversity in police, fire, and emergency services in the city.

CTE in the Pittsburgh schools had also undergone a leadership transition. Angela Mike had gone through the PPS, graduating from the cosmetology program with a license that enabled her to work in the field before she completed high school. The youngest of seven children, Mike managed two salons. After some time in the industry, she got a position as a fulltime substitute teacher at Westinghouse High School, which housed several CTE programs. From there, she secured a full-time teaching job and then became a career development specialist. In 2009, the district's CTE executive director asked Mike if she would be interested in working during the summer on a new strategic plan for CTE. Mike said yes and it was not long before she was appointed interim CTE director for the district. This was a few years before the AFT was looking to engage strong locals in CTE modernization work. By the time the AFT decided to support CTE innovation through grants, Esposito-Visgitis and Mike had developed a good working relationship.

The city-district-union partnership was coming together, thanks to the mayor's task force, changes in CTE leadership and AFT engagement. An exploratory event was held in 2014 to welcome Randi Weingarten to Pittsburgh to discuss a possible grant. A gathering originally slated for 25, to be catered by the district's culinary students, mushroomed to about 60, leaving the new culinary arts instructor Jesse Vishner to scramble to find ingredients for salad and sandwiches for all participants. In June 2015, the AFT announced it was including Pittsburgh in the Promising Pathways initiative, awarding the local union a one-year grant of \$62,000, with the possibility of a second year.

Project plan and intended outcomes

The public announcement of the AFT Innovation Fund grant to the PFT explained that the award "would support a union-school district-city partnership to open an academy to train students for careers in the city as police officers, firefighters and emergency medical technicians. The union would also train guidance counselors on the benefits of CTE and work with parents to build support for them." For union President Esposito-Visgitis, the grant signaled "an exciting opportunity to redefine what CTE is all about." Mayor Peduto saw a way to "create a pipeline into meaningful careers for the youth of our city."

The union used the bulk of the first-year grant to hire a project manager. Darcy Tyhonas began her career as a middle school teacher in PPS and then shifted to teaching English to CTE students, focusing on work-related writing. When the project manager position was posted, CTE Executive Director Angela Mike suggested she apply. Tyhonas did and was hired to manage the partnership and its activities.

The partnership set project five goals:

- Improve recruitment strategies to increase the number of CTE applicants in the district.
- Communicate the vision of "the new CTE" to students, parents and key stakeholders.
- Support the opening of a new Emergency Response Technology program.
- Develop and foster partnerships with the city, the union and employers.
- Collect and analyze CTE demographic, application and marketing data.

For the next three years, CTE's profile in Pittsburgh grew steadily. Programs expanded and new programs were launched. Relationships between the city leaders and the CTE office deepened. Parents and students across the city became aware of opportunities that had been unknown to many of them. Applications and enrollments increased. The union and the district's CTE division deepened their collaboration. According to Esposito-Visgitis, "We worked well together, respected each other and each other's work. We worked hard to make sure that we always had each other's backs." Employers and other unions in the city began relating differently to the district's CTE leaders.

The AFT not only provided the PFT a second year of funding, but also continued support for a third year, bringing the Innovation Fund's total investment in Pittsburgh to \$420,000. Although the COVID-19 pandemic undercut some of their initial progress, the infrastructure and relationships and activities put in place remain to this day. As Angela Mike puts it, "This isn't your grandfather's vocational education anymore."

Activities during the grant period

Everyone who was there remembers the kickoff meeting for the Pittsburgh grant. A large group of government leaders, including the mayor and other city and state elected officials, school leaders, foundation heads, business leaders, and city and civic leaders were invited to participate in a roundtable on career preparation and Pittsburgh's youth: That kind of coming together was not typical for Pittsburgh's CTE program. The mayor made it clear that a key priority for him was the need for greater diversity among the city's emergency responders. Angela Mike took up the challenge and announced that the district was setting up a new Emergency Response Technician (ERT) program and it would be housed at Westinghouse High School, which was 99 percent African American. The mayor was thrilled and committed on the spot to providing a fire truck, an ambulance and related equipment. Everyone was ecstatic: "It was one of the best meetings I ever attended," says PFT President Esposito-Visgitis.

Improve recruitment strategies: During spring 2016 and fall 2017, with help from grant funds, the families of every ninth-grader in the city received a phone call from a CTE teacher or staffer to let them know about CTE offerings

available in high schools across the city. Schoolbased recruitment action plans were created for each high school, which included eighthand ninth-graders having the opportunity to tour CTE facilities. Applications took off, rising from 199 in May 2015 to 340 in May 2017. In June 2017, ninth-grade students were invited to attend an exploratory summer program during which they learned from teachers about six CTE programs through hands-on activities. Grant funds and CTE office resources were used to develop a virtual tour of labs and facilities, a tool that proved useful during the pandemic and should have a life beyond this year as well. One function of more effective recruitment is better program retention: More students are picking programs they are interested in and staying with the program they choose, what Darcy Tyhonas describes as "kids in the right place doing the right stuff."

Communicate the vision of "the new CTE": A key piece of this strategy was the convening of a local stakeholders' roundtable twice each year, usually held at the PFT office. About 40 leaders from the city, the schools, local businesses and unions, local and state government, and philanthropy participated in informational meetings that had the benefit of building political support and focusing attention on CTE in Pittsburgh. In December 2015, the roundtable was attended by then U.S. Secretary of Education Arne Duncan. That meeting had two purposes: to energize civic leaders and to energize CTE students who would typically not have access to national leaders. Tours were organized for target audiences: school counselors who advise students on program options; civic leaders; and specific employers, such as leaders in the local auto industry and realtors who helped families decide on where they would live. State and county officials, as well as the city's mayor, became advocates for CTE modernization and resources. "When the state Legislature or county leaders talked about funds," notes Tyhonas, "we had people on board with helping us."

Grant funds were also used to support an external marketing and rebranding campaign for CTE in Pittsburgh. Billboards were rented around the city near the high schools with CTE programs, to showcase healthcare, culinary, carpentry, emergency response and other specializations, with a website URL for further inquiries. Targeted ads in local publications and media spotlight articles were placed. Marketing strategies also targeted PFT members and Pittsburgh Public Schools administrators, by increasing the volume and relevance of CTE information. Darcy Tyhonas and/or CTE staff visited every PFT general membership and executive board meeting to provide updates about the grant, answer questions, and promote Pittsburgh's new CTE opportunities.

A high priority was placed on celebration and recognition. Students in the culinary program regularly prepared meals and refreshments for CTE events. The PFT sponsors an annual essay contest with a \$500, \$250 and \$100 prize on the topic "What CTE has meant to me." A separate CTE commencement was launched, so that students who graduated in CTE would be able to celebrate with their peers. Graduation program booklets included the names of all CTE graduates, any credentials they earned or awards they won in competitions: The intent was that they feel recognized.

CTE graduation became a big deal. The ceremony was held at the PFT office, an evening event for parents and students, many of whom came "dressed to the hilt" for a catered dinner, beautiful decorations, a DJ, awards for students and teachers alike, as well as distinguished speakers from government, the AFT and local labor councils. Given the pandemic, graduation was an outside event in 2020, held in the decorated PFT parking lot with CTE graduates and their families/friends driving through to receive their awards, gifts and prizes while CTE and PFT staff, teachers and guests cheered, clapped, played music and took pictures. Support the opening of an Emergency Response Technology program: In some ways, launching this program provided an early test of whether Pittsburgh CTE would turn the corner and begin to expand again and do its business differently. In the first grant year, an ERT program was built from the bottom up. In 2015, Matt Patrick, certified in firefighting and EMS, learned about a new position in the Pittsburgh schools for a director for a new ERT program. Patrick applied and was hired. In spring 2016, he began writing curriculum and recruiting students, with support from the grant project manager. Classrooms and lockers were renovated.

In September 2016, the first cohort of about 10 students began the program amid the fanfare of a ribbon cutting ceremony at the program's home school, Westinghouse, attended by AFT President Randi Weingarten, Mayor Peduto, Superintendent Anthony Hamlet and others. Enrollment increased to about 25-30 prepandemic; during the pandemic year, about 14-15 students began in Level I of the three-year program. Donated equipment included the city-provided fine truck, ambulance and police car. The fire team also has a very realistic forcible entry door simulator for students to train on.



According to Matt Patrick, "I am here because of the grant from the AFT. It enabled me to help recruit for the program, to secure some of the resources for the room itself and gave me the breathing room necessary to write the curriculum for the program." The approach to launching the ERT program was adopted for other programs launched during the grant period, including the revamping of the culinary program to maximize hands-on training in a restaurant/catering setting, and a multimedia production program.

Creating programs and modernizing existing ones has continued. City Councilman Anthony Coghill recently unveiled a plan to develop a working urban farm in the Brookline neighborhood. Esposito-Visgitis quickly met with the councilman's office and then brought in Angela Mike so that they could collaborate to develop another innovative partnership with the city to create a CTE program focused on farming and agriculture. The proposal included Penn State's College of Agricultural Sciences as a partner.

Develop and foster partnerships: The first and most important partnerships that Mike, Tyhonas and their CTE team targeted were internal: with the administrators of the PPS and the executive board and membership of the PFT—so CTE



improvement and expansion would be able to cultivate allies that would outlast the grant. A partnership with the city was essential for the growth of the ERT program. The city provided equipment, and its employment office was a key partner in building out a pipeline for students interested in pursuing careers in—and adding to the diversity of—the city's police, fire and emergency response personnel. Others donated equipment, including firefighter gear with students' names on them and stamina equipment that firefighters use to stay in shape.

A strong partnership was developed with the Greater Allegheny Auto Dealer Owners Association, which established a scholarship program for auto technology students to advance their education after high school. PFT officials and members reached out to other unions around town, particularly in the trades; this outreach paid off in goodwill and in these unions' engagement with aligned CTE programs.

The CTE office and the PFT looked for additional partnerships that could support new programs. One of these included the multimedia program that was created by longtime Pittsburgh videographer Jeff Hackett after Angela Mike took over as the head of CTE. Hackett still worked in the industry and used his connections to engage with the nonprofit Steeltown Entertainment Project and the University of Pittsburgh events center.

Collect and analyze CTE data: The grant supported the district to improve its data collection on CTE students and their progress, though there remains much to be done if the district is to collect sufficient long-term data to know what happens to graduates. Application and enrollment data collection improved, as did the data on recruitment activities, dropout and completion rates, and participation of nontraditional students. However, few teachers or administrators have a complete picture of the next steps for their students after graduation. Anecdotally, Matt Patrick knows that a few ERT students went on to college, one secured a job as a security guard and two recent graduates have taken the EMT licensing exam. Lack of reliable long-term data on how high school students fare post-graduation is not just a problem for CTE programs; it is a common challenge facing districts nationally. However, without better data collection and analysis, no matter how much progress has been made on increased applications, enrollment, persistence and completion, it will be hard to justify the CTE program modernization based on costs and benefits to students.

Outcomes and legacy

PPS's efforts to improve and expand CTE, supported in part by the AFT grant, have had a significant impact on students, teachers, and the public perceptions of CTE and hands-on education in Pittsburgh's high schools. Equally important, progress in raising CTE's visibility and reach has also had a very positive effect on how CTE leaders and teachers in the city see themselves. Patrick punctuated the depth of support from the community: "Volunteers from fire and EMS and other departments served as guest speakers and helped with [students'] National Occupational Competency Testing Institute tests, senior exit tests, and served as judges." Students were deeply impacted by their CTE experience. Ashanti Rouse, an 11th-grade student in the ERT program said, "I like that the CTE program helps to get where you want to be in the future. The best thing I learned in this program was to work hard for what you want and never give up; it a good start for your future." And Victor Stevenson, an 11th-grade student in ERT, said "I like how we learn and train about everything related to fire, EMS and policing. I think it's cool we get to experience things that first responders get to do in real life situations."

Programs and credentials: PPS has added new programs and revamped some older programs to include more academic content and be more useful as career exploration vehicles for students. The ERT program is perhaps the highlight. Designed to address the need to increase the number of native-Pittsburgh first responders, at a time when the police and emergency forces were largely being drawn from the surrounding areas, and underrepresented people of color, the ERT program was a chance to train students from the community that they would serve. It was the centerpiece of the city's plan for expansion into new fields through the grant. At the same time, though, other programs were introduced or modernized, including culinary arts and multimedia production and coding. Today, 15 half-day programs across six high schools enroll about 500 students for threeyear comprehensive course sequences. Another 3,900 students take exploratory CTE electives to help learn skills and discover different occupational paths.

In recent years, Pittsburgh's CTE strategy has emphasized real-world learning, closer relationships with local employers and industry leaders, and certification and college credits that can help students in their pursuit of further education and career employment. Particularly important, student retention in three-year CTE programs has increased; students are more likely to find a program they like. Additionally, improved instruction and equipment, coupled with more professional development for CTE teachers, has improved student engagement with program content.

CTE leadership and faculty have identified certifications that students can prepare for and earn through their programs, from OSHA safety certificates and CPR to web IT certificates and EMT certification. These are now marketed prominently in outreach material for students considering CTE. Total certifications earned by CTE students have risen significantly, almost doubling since 2017-18 (see Figure 1 Several programs, including health careers, culinary arts and RHVAC (refrigeration, heating, ventilation and air conditioning), have negotiated dual

	-		
2017-18	2018-19	2019-20	2020-21
319	497	370	574

enrollment credit agreements with the Community College of Allegheny County, an incentive to students and their families that has been furthered by the Pittsburgh Promise free college initiative available to city residents.

Visibility and Vitality: The influx of grant funds, a new project manager position, along with activities to raise the visibility and community support for CTE in Pittsburgh have been consequential. The marketing work has helped reach more students and parents. The twice-a-year roundtable of city and regional leaders has built relationships that have paid off in resources, respect and political support. CTE teachers got involved in curriculum development and redesign-and this has continued. The central role of the PFT broadened and improved relationships with the school district, which is frequently characterized by tension around contracts, salaries and other collective-bargaining issues. The union role also helped CTE teachers feel more connected to the Pittsburgh Federation of Teachers, their union. PFT official Harold Grant noted the pride that teachers and union leaders felt when they saw the logos of both PPS and the AFT on the ERT program mural at Westinghouse High School.

Teachers and CTE officials have also seen their interactions outside the schools expand. Angela Mike was asked to join the Mayor's Workforce Task Force. She went to Washington, D.C., to testify on recommendations for performance indicator revisions of the Perkins V Act. Matt Patrick was invited to revamp the state's competency list for ERT programs. He was also asked to participate in a review committee to revise several chapters of the EMT handbook. As a CTE career counselor at Westinghouse puts it, "I never thought I would work hand in hand with the mayor, that I would meet heavy hitters. But we see each other on a regular basis—and we have kept it up even after the end of the grant."





Peoria: Building a Regional Pathways System

Origins: Context for Innovation Fund Grant

Peoria's CTE modernization initiative, partly funded with three years of support from the AFT Innovation Fund, had its origins in both state and local recognition of a gap in programming for high school students.

In 2012, the State of Illinois launched Illinois Pathways, an initiative designed to engage employers and educators in encouraging high school students to pursue programs in nine STEM (science, technology, engineering and math) career clusters. This effort was aligned with other state-level education and workforce initiatives to encourage more high school students to pursue career pathways leading to good jobs. The initiative tapped over \$3 million from Illinois' Race to the Top grant to support the development of seven district-level STEM-focused publicprivate partnerships. An intergovernmental coordinating committee was established to guide the work and support local initiatives, with participation from P-20 education, workforce and economic development.⁹

That same year, Illinois joined Jobs for the Future's Pathways to Prosperity Network, a multistate network inspired by the Harvard Graduate School of Education's 2011 report "Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century," which argued that our current education system was too narrowly focused on "a four-year college or university degree immediately after high school, while other postsecondary routes to careers might suit significant numbers of students far better."¹⁰ Initial activity in Illinois was concentrated in Chicago (five early college STEM schools rooted in a grades 9-14 IT pathway) and in Aurora (a modernization of career and technical education, focusing on IT, dual credit and employer engagement).

During these years, Peoria was pursuing its own course for modernizing and reinvigorating career and technical education. As with programs in Pittsburgh and other Rust Belt cities, Peoria's CTE education program suffered enrollment and prestige declines in the 1980s as industry contracted and pressure for "four-year college for all" mounted. This erosion continued for several decades; but by the first few years of the 2000s, employers, educators and political leaders began to coalesce around a revival of career exposure, planning and programming for the city's high school students. Woodruff High School, one of Peoria's four high schools, was closed in 2010 and reopened a year later as an up-to-date Career and Technical Center. CTE programs housed at Manual High School, which included a strong partnership with Caterpillar, were opened to all Peoria high school students.

The city's mayor, Jim Ardis, was impressed by the statewide Pathways Initiative. Jobs for the Future staff began talks with the mayor and



others in Peoria, hoping to engage the city as a new local member of the state network. Ardis saw the potential for engaging local businesses in career-focused work experiences for young people, improving their understanding of career options, helping them master workreadiness skills, and motivating them to pursue postsecondary learning.

Jobs for the Future undertook a robust regional "asset mapping" assessment of the Peoria area's strengths and readiness. A two-part strategy emerged: (1) internships for high school students with local employers and (2) a school-based system for connecting students with internships aligned with revamped CTE program curricula.

In 2014, Mayor Ardis pulled together a diverse group of stakeholders—to better connect Peoria Public Schools students with careers most needed in the region and to improve student outcomes. Partners included the Peoria school system, the city, Peoria Federation of Teachers, Peoria Regional Office of Education, Illinois Central College (the local community college), Peoria Area Chamber of Commerce, CEO Council, Illinois Student Assistance Commission, and Greater Peoria Economic Development Council.

Partners formed a steering committee to guide the initiative. Particularly important players included Bill Collier, the mayor's right hand on education policy, who was a retired superintendent from a nearby wealthy district, and Paula Davis, also a retired superintendent, from a nearby district with a vibrant CTE program. In June 2014, the partners signed a joint resolution formally creating the Peoria Pathways to Prosperity Initiative, which "seeks to ensure that many more youth complete high school and more high school graduates are college and career ready." The ultimate goal was to develop "six-year grade 9-14 career pathways for students from high school through community college and into the workforce."

Jeffrey Adkins-Dutro, president of the Peoria Federation of Teachers (PFT) and a member of the steering committee, learned that the national AFT was looking for AFT affiliates to join its Promising Pathways CTE initiative. Adkins-Dutro submitted a proposal that leaned into involving teachers and counselors more systemically in the pathways work and targeting students of color for career opportunities. The proposal was approved, and Peoria was invited to join Pittsburgh, Miami and San Francisco in the initiative. As in the case of Pittsburgh, one year of funding was guaranteed, with an option for a second. In the end, the Peoria Federation of Teachers and Greater Peoria Works, as the campaign ultimately was named, received grant funds totaling \$265,000 over three years.

Project plan and intended outcomes

A signing ceremony was held at City Hall in December 2015. By that time, the partners had refined their priorities and goals:

- Closely align career pathways for high school students with local job opportunities by creating a searchable online platform to connect industry partners with students for internships and other opportunities;
- Launch high school-based career centers to better identify and match internship candidates with potential employers;
- Expand early college credit opportunities with Illinois Central College by collaborating on a pathways framework that provides course sequencing for each of the 16 high school CTE career clusters and overall improved articulation between secondary and postsecondary tracks; and
- Expand partnerships between the Peoria Public Schools system and businesses into a regional model.

Because the emphasis was on engaging employers and building out a regional system, the partners decided not to house the project manager within the PPS or the PFT local. Instead, the project manager hired to drive the initiative forward, Brent Baker, was hired onto the staff of the Greater Peoria Economic Development Council (GPEDC), a nonprofit serving a five county-area that includes the city of Peoria.

Activities during the grant period

Year 1 (2015-16)—Establishing the Foundation: In the first year of the initiative, the focus was clearly defining expectations and winning over employers and high school leaders to the idea of internships and varied pathways to postsecondary learning. Getting individual high schools to embrace the proposal was complicated. Each Peoria high school had a distinct profile. One, better resourced, the home of the International Baccalaureate program, was college-focused and cool to CTE. Another, located in one of the poorest ZIP codes in the country, struggled to see how it could take on new responsibilities. Many employers' first reaction was "no." According to Brent Baker, "When work began in earnest in the fall of 2015, there was little precedent or local best practices on how to encourage employers to engage with high school students through focused career-development activities." So during the first year, Baker and his steering committee researched viable models, connecting with other communities around Illinois, including Rockford and Aurora, and testing different messages to address employer concerns and spur their participation. In addition, the partners had to resolve a confusing duplication of regional efforts to organize employers to create internships.

The project made limited headway in its first year. Looking to change the dynamic, Baker enlisted Mayor Ardis to reboot the employer engagement side of the initiative. A high visibility Peoria Mayor's Internship Challenge was launched to engage the region's largest firms, using the mayor's political connections to issue a challenge to business leaders. As a result, several large employers stepped up: OSF HealthCare, UnityPoint Health-Peoria, Caterpillar, Goodwill Industries and CSE Software. Easter Seals of Central Illinois became the first employer to take on interns employing two students.

Progress within PPS high schools was also slow. The person who was then the CTE administrator was reluctant to embrace career pathways and rework how curricula were presented to students and parents. There wasn't an articulated vision of the courses a given program required. Also, the sequence in which courses should be taken and the electives that might make sense to augment required courses were missing.

Brent Baker convened a CTE and Dual Credit Working Group involving staff from PPS, Illinois Central College, and Education for Employment (the Perkins funds administrator for the region). Peer exchange trips were arranged with the upstate District 214 to learn from its Career Pathways effort across six local high schools. Illinois Central College was supportive, seeing an opportunity to strengthen the high school pipeline to ICC. However, little progress was made on reframing CTE so that students and parents would think in terms of programs and pathways rather than courses. This changed for the better in the grant's second year when a new academic instructional officer, Tom Welsh, took over. According to Baker, "From our first conversation, it was like a switch was flipped. He got it. He was reform-oriented."

Year 2 (2016-17)—Framing the Structure:

The Mayor's Challenge was not a one-shot event. Rather, it became the cornerstone of employer engagement for internships. Monthly meetings were held at City Hall with the mayor participating as his schedule allowed. Three weeks of identification and outreach to employers culminated in invitations to a City Hall informational session. Following the meeting, GPEDC staff continued to engage employers and turn leads into commitments and implementation. The team was helped by consultation from staff at Brigham and Women's Hospital in Boston with peers at Peoria's two largest healthcare systems, UnityPoint Health and OSF HealthCare, focused on the approach used in Brigham and Women's decade-old high school internship program.

Peoria area employers were enthusiastic, though some were naive about the pace at which a typical internship program grows. According to PFT President Adkins-Dutro, some thought it would be easy to engage 1,000 employers right away. The reality was different, but still impressive. More than 120 companies in the city and region signed on; 33 of 38 companies providing internship opportunities were solicited through the Mayor's Challenge. In 2016-17, 70 students were placed in internships, in industries from health services to manufacturing, arts and entertainment, and city government.

In late 2016, the two competing internship efforts in Peoria were consolidated into one. GPEDC took the lead; the CEO Council committed to assist in resourcing career development opportunities for students. The number of employers registered in the online system rose to 140.

To help connect Peoria students to available internships and job-related opportunities, Peoria Pathways piloted career centers at three high schools (all except the CTE center at Woodruff). Staffed by school counselors and by recent high school graduates enrolled in Illinois Central College, the career centers helped students with resume writing, mock interviews, and use of the online internship matching platform. After three semesters, the pilot ended. While 300 unique student visits were tracked, with half preparing resumes and almost as many applying for internships or jobs, only 33 students secured placements—a placement rate of only 6 percent that called into question the time and resources that went into staffing the centers. One takeaway from this experiment: Career readiness activities for high school students are more effective when integrated into coursework and school time rather than as a stand-alone after-school option. Support for such in-school activities by CTE instructors became an important focus following the closeout of the centers.

In addition to expansion of internships, Peoria Pathways saw the need to strengthen in-school career exploration and CTE programming. Academic instructional officer Tom Welsh and Brent Baker agreed to a shared definition of their Career Pathways goal: to build "an intentional sequence of courses guiding students toward concrete next steps aimed at career success."

During the 2016-17 school year, 12 PPS counselors were invited to participate in a process designed to identify and map out career pathways for CTE students. Three teams were established, each responsible for recommending five career pathways and sequencing for courses that a student could follow from grade 9 through grade 12. By late fall, 16 pathways were identified and mapped out. Illinois Central College administrators worked with college deans to align college certifications, degrees, and transfer degree programs with the Peoria framework. A pathways guide was designed and distributed to the high schools for use in registration for the following year. In the spring, partners worked together to support use of the guides with students. In addition, planning groups were convened to explore new pathways in health sciences, information technology, manufacturing, public safety and education. PPS became increasingly committed to helping more students understand their career education options and encouraging more students to dual enroll in ICC courses while still in high school.

Year 3 (2017-18)—Expansion and

Regionalization: As the program evolved, the steering committee saw reasons to expand beyond the city of Peoria. Regional education organizations and school districts wanted to get involved. The Greater Peoria Economic Development Council, charged with serving five counties, found it hard to work with only one school district. Employers looking to participate were located all around the region, not just in the city. Illinois Central College's new CEO, Dr. Sheila Quirk-Bailey, added another energetic voice for regional action: "I had helped a regional partnership get going when I ran customized training for many years at Harper College upstate. I believed strongly that we could do the same thing here in Greater Peoria, with the college at the center." Given these interests, the team decided to scale up its efforts in Year 3. A call to regional superintendents to join secured the participation of five additional districts and a charter school.

Participants in Regional CTE Pathways Initiative

Dunlap High School East Peoria High School Elmwood High School Illini Bluffs High School Pekin Community High School Peoria Public Schools Quest Charter Academy

The steering committee developed a plan to both deepen its capacity to serve Peoria city residents and launch activities in the new district high schools. In combination with a grant from the state, the AFT grant to the PFT helped make it possible to hire a career coach to coordinate outreach to and support CTE students for each of Peoria's three comprehensive high schools. At the same time, GPEDC staff, led by Brent Baker, reached out to the new districts and their leadership. Employer participation and internship opportunities rose significantly, particularly in healthcare and manufacturing, where large hospitals and several Caterpillar divisions led the way.

By August 2018, Greater Peoria Works had signed up 152 employers for its online platform and had provided 402 career development opportunities to students. During the year, 28 new businesses in IT, healthcare, and manufacturing got involved. Across the three years of the grant, 190 students from Peoria Public Schools and other districts received internship placements in 38 different companies. Internships at manufacturing companies jumped from seven in a small Caterpillar project to commitments of 65 positions for fall 2019 across 11 companies/ divisions. Significantly, 22 of the 190 placed interns-around 12 percent-were retained as regular employees after their initial experience. Interns averaged about \$9 an hour in wages. The students who were placed were overwhelmingly of color: 78 percent across the three years. They were predominantly female (64 percent). (See Figure 2 for goals and actual placements for the three years of the grant and projections for the following year, 2019.)

Courtney Newgard, regional manager for talent acquisition at UnityPoint Health, was involved from the first days of the Mayor's Challenge: "We could not have imagined how much we would benefit. It is exciting to see what has come about from the Mayor's Challenge and Brent's work. We were able to develop partnerships and share information about job categories where we needed more qualified candidates. We have now introduced these jobs to a new generation of students, including many from the Peoria Public Schools."

The Greater Peoria initiative also made strides in Year 3 specifying and implementing career pathways for high school students. Principals and counselors from participating districts pursued their own mapping exercise, starting with health sciences, information technology, and manufacturing. This information was then edited by Illinois Central College and GPEDC staff so that the high school and college curricula aligned. A similar exercise was completed later in the year for additional career clusters: business and administration, agriculture and natural resources, education, and transportation and logistics. Design of a repository for the various districts' career pathways maps, to be available to all participating schools, was in the works at the end of Year 3.

Goal	Year to Date					
	2016	2017	2018	2019	Total	
Internships Placed	25	75	100	100	300	
Unique Internship Placement Sites	10	25	25	30	90	
Progress To-Date						% of 2019 Goal
Internships Placed	12	60	117	143	332	110.67%
Percent of Yearly Goal	48%	80%	117%	143%		
Unique Internship Placement Sites	9	12	18	35	74	82.22%

By this time, Illinois Central College had become a prime leader—and beneficiary—of the regional effort. Alignment of high school and college CTE programs expanded the opportunity and the mechanism for many high school students to dual enroll in college level courses. According to ICC President Sheila Quirk-Bailey, dual enrollment at ICC doubled in the four years after the AFT grant was secured, enabling high schoolers to explore college options and to see that they could do collegelevel work.

Peoria's Continued Commitment to Internships and Regional Pathways

The Greater Peoria effort has continued to grow and evolve. It has not always been a straight line, but on balance the PPS and other regional partners are in a very different—and better—place in regard to the modernization of CTE programming than before the grant and associated activities.

Internship placements got a big boost from Caterpillar, which deepened its commitment to take on high schoolers after an internal study concluded that a high school student who completes an internship is likely to stay with the company longer and generate recruitment and onboarding savings. According to Greg Tomlins, a Caterpillar manager, "While there are costs, there are multiple benefits. We came to understand the next generation workforce much better. Improving hiring and onboarding practices for interns helped us more broadly, since they represent the community from which we are going to be making a lot of new hires."

A group of strong manufacturing employers including supply chain manufacturers followed Caterpillar's lead. However, at the same time, efforts to develop internship placements and an information technology program fell short of enrollment goals. Greater CTE coherence and ambition also developed unevenly. Initial enthusiasm for a new teaching pathway was slowed by the difficulty interested students had in meeting the reading level requirements of ICC's education program. Peoria high schools competed to have the teaching pathway in their building, only to find that it was difficult to enroll sufficient numbers. At the same time, in the PPS, the idea of a system of career planning took root. A four-day hands-on exploration program called Career Spark is now offered to Peoria seventhgraders, who get a chance to rotate through 12 career clusters and write about what they find interesting. PPS created more than a dozen new CTE programs, and this trend continues: For 2021-22, new programs will include office occupations, renewable energy, graphic communications and teaching (as well as nail technology to draw students in who might not otherwise consider CTE).

The infrastructure for internships and career pathways has been institutionalized. The Greater Peoria Economic Development Council continued its regional K-12 efforts, integrating them in a framework that also targeted unemployed workers and individuals with multiple barriers to employment. The organization has since



transferred the initiative to a business-led Regional Workforce Alliance. Illinois Central College has become the glue across the region for dual enrollment opportunities and pathways to occupational credentials. The emphasis on college credits that can be earned while still in high school has been augmented by a concerted effort to identify industry-recognized credentials that can be earned simultaneously, in fields that include automotive, health occupations, and IT. Relationships with employers have become more routine and natural. Staff assigned to work as coaches with employers in particular pathways have enabled Woodruff and other PPS CTE programs to provide more ongoing and robust mentoring and support.

The pandemic challenged the partners' efforts. Work-based learning was made almost impossible for much of the, year and growing new programs was slowed; but the partners' hard work has paid off. Michael Kuhn, principal of Woodruff Career and Technical Center, points to the current crop of 60 paid interns and the plans for another 40 this summer. He also notes that so far this year, 280 industry-recognized certifications have been earned by Woodruff students. In June 2021, PPS planed a reboot for parents, students and the community so help grow interest and enrollment in CTE programs and internships.

The AFT Innovation Fund grant and related activities helped strengthen the union's position in the community and with the district, increasing the likelihood of success. According to Paula Davis, a key adviser to Mayor Jim Ardis, "This wouldn't have gotten done without the AFT grant. I saw what was happening in Peoria before this." In her view, the grant bought time and goodwill that was needed for the effort to take shape, first in the city and then more broadly in the region. It also brought national recognition and visibility. Along with the grant came several well-timed visits by AFT President Randi Weingarten. In Peoria, as in Pittsburgh, Weingarten's appearances provided opportunity for partners, including CTE teachers and counselors but also political and civic leaders, to come together, celebrate and feel part of something bigger.

The grant helped the union in its positioning with the district. According to PFT President Adkins-Dutro, "We wanted to do this work for our students and for our members. We were able to get onto a first-name basis with everybody interested in improving the career decisions and options for Peoria high school youth. This turned out to be a huge plus. We didn't have collaboration from the superintendent at the time of the first grant." During the grant period, though, working collaboratively with local business, political, and civic leaders strengthened the union's reputation and its perceived value as a partner in problem-solving and CTE expansion.





Lessons from Pittsburgh and Peoria for the AFT Innovation Fund

In some ways, CTE modernization initiatives in Pittsburgh and Peoria from 2015 through 2018 feel like they took place a long time ago. It was indeed a different moment, before the disruption of work, learning and opportunity in the wake of the pandemic and heightened concerns about the future of work post-COVID-19. At the same time, the fund's CTE grants ended only three years ago. The momentum created by them is still driving partnerships and innovations in both cities toward a more modern, effective and equitable system of high school career education.

The grants to spur improved career planning and programming for Pittsburgh and Peoria high school students were made in a very particular time. After several decades of "fouryear college for all" squeezing out investment in high school vocational education as a robust alternative for many young people, the pendulum began to swing back by the early 2000s. Research was demonstrating positive outcomes for CTE course-takers, particularly for low-income students and young men. Rising college costs increased parents' and policymakers' receptivity to modernized, welldesigned career and technical education.

Research and advocacy reports coalesced around a modernized CTE that would increase the opportunities available to many young people to explore careers, gain workbased experiences, and earn credits and credentials with value in planning for college and career. This positive vision foregrounded more effective career exposure and planning, learning that mixes academic and hands-on technical skills, and regional partnerships among K-12 districts, community colleges, and local employers.

Pittsburgh and Peoria pursued somewhat distinct strategies and used the AFT grants differently:

- In Pittsburgh, the focus was on strengthening and modernizing CTE programming within PPS. It was a citywide strategy but did not extend to districts outside the city of Pittsburgh. Funds were used to improve CTE marketing to students, parents and the community, and to develop and deliver new CTE programs that could meet employer demand and student interest.
- In Peoria, state efforts dovetailed with local interest, providing a different starting point, encouraging an approach that was more regional in ambition and scope. The initiative in Peoria was also more focused on creating a system and infrastructure for identifying and managing internships and other work opportunities for local high schoolers than was the case in Pittsburgh, where traditional classroom-based handson learning was more the norm. Funds primarily covered staff expenses to organize employers to participate and to partner with CTE leads in Peoria and then other local districts to specify career pathways starting



in high school and extending into the local community college.

• In both locations, the grants created the conditions for positive outcomes.

Conditions for Success:

In both locations, Peoria and Pittsburgh, the grants created the conditions for successful outcomes, including the following:

- Dedicated staffing: While the two approaches differed, the grant to the local union played a similar role in each community. Funds were used to hire staff to manage the initiative. "Everybody had their day job," noted one school leader. "Someone needed to come in and organize the work." In Pittsburgh, this meant building and maintaining relationships among the union, the district CTE leadership and superintendent, and the political, business and civic leaders providing overall guidance and support. The project manager's experience in the PPS and within CTE helped Pittsburgh's launch to result in early successes. In Peoria, because the project manager was housed in a regional economic development organization, the work of aligning the various interest groups behind a coherent and ambitious initiative was perhaps more challenging. Progress in the first year was slow and, to some extent, under the surface.
- *Time*: In both communities, the grant bought an important commodity: time. Time to turn a proposal into a workable plan of action; time to build support with key allies and to demonstrate a seriousness of purpose; and time to overcome resistance and hesitancy to changing business as usual. According to Paula Davis of the Peoria team: "The AFT grant afforded us the time we needed."
- *Catalysts*: The grants served as catalysts for specific activities and program expansions

and innovation. Additionally, being selected offered both recognition and funding, serving as a further catalyst for new energy, spirit and sense of possibility. Three years of funding—and visits from AFT President Randi Weingarten and U.S. Secretary of Education Arne Duncan—energized teachers, administrators, and their political and civic allies.

- Marketing and Messaging: For the Pittsburgh and Peoria teachers union locals, there were both internal and community-wide benefits. Internally, leveraging the grant support, they were able to engage CTE teachers in shaping the initiative and how it was messaged. Internal silos that existed between CTE educators and other union members were lessened. In Pittsburgh, the union's direct involvement created opportunities for high energy CTE-themed celebrations and events that meant a great deal to educators and administrators who had often felt distant from the main business of the district. Some of the people who were involved had access to opportunities they had not imagined prior to the grant: opportunities to speak in public, to meet civic and political leaders, to participate in committees revising CTE curricula. Horizons were raised, and pride in their accomplishments grew.
- Labor-management collaboration: For both unions, there were community benefits that persisted. Union-district relations are sometimes adversarial, dominated by negotiations over contracts, wages and staffing. Bringing resources to the table and committing staff time and energy to reform and innovation helped them overcome the common cycle of conflict and pushback. In each city, the union's reputation within the district improved. The union's relationship with key political leaders, including the mayor, and with business, civic and other education leaders helped them bank goodwill that would come in handy later, during contract negotiations or on issues



of city budgets, economic development and other public issues. According to Bill Collier in Peoria, "The grant bumped up the relationship between the electeds and the union—and made it easier to move the agenda forward." According to Pittsburgh local President Nina Esposito-Visgitis, "The grant helped us with other unions, too. It got them involved and interested in our students. It lifted up CTE programs for construction and other union jobs in Pittsburgh."

Future Opportunities for Funding and CTE Programming

Today, across the U.S., CTE programming for high school youth is viewed more favorably than 20 years ago. Bias against CTE pathways still exists, and many CTE programs never really recovered from earlier disinvestment and stagnation. Even for the more successful programs in terms of pedagogy, career exploration, and college and/or career preparation, there is still significant room for improvement. If anything, the challenges are becoming more daunting. The growth in the use of digital technology in the workplace underscores the need for stronger math and English fundamentals to prepare students for career success. At the same time, employer demand for customer service and problemsolving skills makes internships and work-based experiences more compelling and necessary.

Funding for future programming may support professional development for CTE teachers, resources for updating equipment, staff and infrastructure for building and maintaining relationships with local employers and postsecondary institutions.

Considerations for future CTE support: The decision to pursue further activities in CTE will require due diligence. The AFT Innovation Fund must consider local capacity and appetite. In advance of these CTE grants, the AFT undertook a survey of its members who were teachers and staff in CTE programs to understand their interests, concerns and challenges, and to help determine what kind of initiative might make sense. Further surveying of members and leaders would be prudent. Understanding the communities that have taken their own course in revamping and re-energizing their CTE schools and programs will allow the Innovation Fund to target support to boost existing efforts.

Lessons from Peoria and Pittsburgh that could drive future support include: building in opportunities for peer learning and for sites to get to work with each other and learn from each other, and renewing and committing to a vision for how CTE should be growing and evolving, and developing novel ways to compel districts and the projects themselves to capture, use and share data.

In all cases, the efforts of these two communities point the way: pathways linking high schools and local community colleges; strong engagement of employers; an emphasis on credentials and credits that can increase student momentum to either community college or employment in a good job; and a commitment to equitable access and progress in CTE for students from traditionally underserved populations. As it relates to more and better data, collecting good data on CTE students, their trajectories in programs and after graduation was hard to collect and report for both Pittsburgh and Peoria. Data will ultimately be needed to justify the growth of CTE programs and divisions and inform decision-making around programming, scaling and future funding.

Endnotes

- 1 Jacob, B.A. (2017). What We Know About Career and Technical Education in High School. Washington D.C.: Brookings Institution.
- 2 U.S. Department of Education (2014). National assessment of career and technical education. Final report to congress. Technical report, Washington, D.C.
- 3 Hudson, L. (2013). "Trends in CTE Coursetaking." National Center for Education Statistics, NCES 2014-901.
- 4 MDRC and Results for America. (2019). What Works in Career and Technical Education: Evidence Underlying Programs and Policies that Work. New York: MDRC. http://www.mdrc.org/sites/default/files/ What-Works-in-Career-and-Technical-Education. pdf#:~:text=ln%20general%2C%20multiple%20quasiexperimental,men%2C%20and%20students%20 with%2disabilities.
- 5 Stevens, A.H. (2019). What Works in Career and Technical Education? A Review of Evidence and Suggested Policy Directions. Washington D.C.: Aspen Economic Strategy Group. https/www.aspeninstitute. org/wp-content/uploads/2019/01/1.2-Pgs-40-54-What-Works-in-Career-and-Technical-Education.pdf
- 6 American Federation of Teachers. (2014). "The Voices of Career and Technical Education Teachers". Washington D.C.: AFT; AFT. Resolution: Career and Technical Education Pathways.
- 7 AFT. (2013). Career and Technical Education: A Pathway to Success. Washington D.C.: AFT. https://www.aft.org/ news/career-and-technical-education-pathway-success.
- 8 AFT Announces Five-City Compact to Support Career and Technical Education Pathways. Press Release. AFT. June 11, 2015.
- 9 Jobs for the Future. (2014). "The Pathways to Prosperity Network: A State Progress Report, 2012-14." https:// jfforg-prod-new.s3.amazonaws.com/media/documents/ Pathways-to-Prosperity-for-Americas-youth-080514.pdf
- 10 Symonds, W.C., Schwartz, R.B., & Ferguson, R. (2011). "Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century." Boston, MA: Pathways to Prosperity Project, Harvard Graduate School of Education.
- 11 Baker, B. (2018). "How a Question Resulted in Community Connections." *Continuance*. Winter-Spring: 11-12

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