

Moving Up the Ladder: Per Scholas Launches *Project Scale*



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The Economic Mobility Corporation (Mobility) identifies, develops and evaluates programs and policies that enable disadvantaged individuals to acquire the education, skills and networks needed to succeed in the labor market so that they can support themselves and their families.

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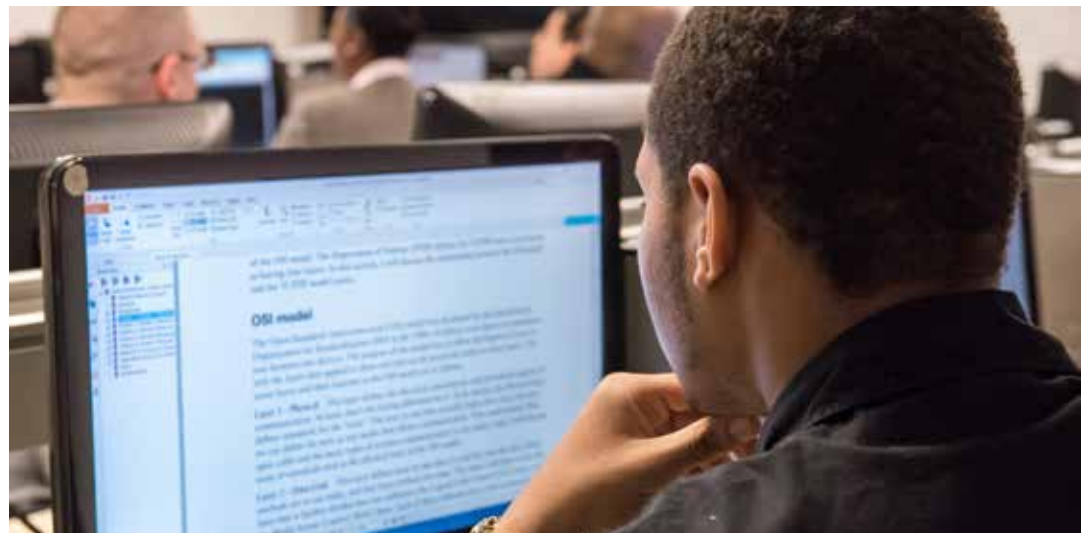
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This report is dedicated to my longtime friend and mentor, Robert Curvin, Mobility's founding board chair. Bob was my boss at the Ford Foundation and the dean of my graduate school. He shared my devotion to the New York Mets and always inspired me with his optimism that we all can do better.

Table of Contents

6	Introduction
7	The Rising Importance of Skills
9	The Technology Sector
10	Profile: Sheena
11	Launching Project Scale
13	Program Structure
13	Recruitment
15	Many Scale Participants Face Daunting Financial Challenges
17	Program Participation and Support
19	Job Development
20	Impact of Student Loans
21	Analysis of Program Performance
28	Profile: Kristian
29	Conclusion
30	Scale's Future
31	Endnotes





Figures

- 7** Figure 1: Articles on Income Inequity in the *New York Times* Surged between 2009 and 2015.
- 8** Figure 2: Receipt of Employer-Provided Training Declined between 1996 and 2008
- 12** Figure 3: As Federal WIA Funds Declined, Foundation Funding for Workforce Development Rose in New York City (2015 Dollars)
- 15** Figure 4: Project Scale Participants Came from All Five Boroughs of New York City
- 16** Figure 5: More Than Two-Thirds of Participants Were Black or Hispanic (N=124)
- 16** Figure 6: About Half of Participants Had Only a High School Diploma or GED (N=124)
- 16** Figure 7: Just Over a Third Had Been Unemployed for Six Months or Longer (N=124)
- 16** Figure 8: Nearly Half of Participants Had a Subprime Credit Score or No Credit Score (N=108)
- 17** Figure 9: Participants Had Substantial Debt (N=108)
- 17** Figure 10: Debt Levels Varied by Credit Score (N=108)
- 19** Figure 11: 85 Percent of Participants Graduated (N=124)
- 20** Figure 12: Student Loan Debt Averaged More Than \$30,000
- 20** Figure 13: Participants with Student Loans Were Less Likely to Obtain CCNA Certification
- 22** Figure 14: Participants with a Bachelor or Master's Degree Were More Likely to Obtain CCNA Certification
- 22** Figure 15: Participants with Higher TABE Math Scores Were More Likely to Obtain CCNA Certification
- 23** Figure 16: Participants with Three or More Years of IT Work Experience Were More Likely to Obtain CCNA Certification
- 23** Figure 17: Participants with Past-Due Debt Were Less Likely to Obtain CCNA Certification
- 24** Figure 18: About a Third of Participants Obtained Jobs More Than Three Months After Training Completion
- 25** Figure 19: The Majority of Participants Obtained Jobs Regardless of How Long They Had Been Unemployed
- 25** Figure 20: Duration of Pre-Program Unemployment Did Not Affect Post-Program Wages
- 26** Figure 21: Participants Who Earned CCNA Certification Were More Likely to Obtain Jobs
- 27** Figure 22: Participants Earned Significantly Higher Average Hourly Wages Post-Program Than They Had Pre-Program
- 27** Figure 23: Participants Worked Significantly More Hours per Week Post-Program Than They Had Pre-Program

Introduction

After emerging from the Cypress Avenue stop on the uptown 6 train, navigating across Bruckner Boulevard's ten lanes and through a gaggle of methadone patients waiting for prescriptions, one arrives at Per Scholas' headquarters, in the South Bronx. On most days the faint smell of hot dogs seeps from the Sabrett factory, across 138th Street.

Up three flights, classes hum with dozens of students working on computer monitors in rooms so clean they feel antiseptic. Most are male and nearly all are minorities. They are learning to configure, repair, and troubleshoot computers, deliver information technology (IT) support, and to prepare for A+ and Network+ certifications, the Computing Technology Industry Association's (CompTIA) entry points for a career in IT.

Founded in 1995 in the South Bronx, the nation's poorest congressional district, Per Scholas initially sought to bridge the digital divide for families in the area by offering low-cost computers and IT training. Today it focuses exclusively on training, preparing several hundred New York City residents each year to begin careers in technology. In 2014, Per Scholas launched a national replication of its A+ training program, IT-Ready, offering programs in Columbus, Ohio; Cincinnati; Washington, DC; and Dallas. The replication was supported by solid evidence of Per Scholas' success: In 2008, it became one of the only workforce development organizations in the country to demonstrate that its students achieved large earnings gains in a random control trial evaluation. In the second year after training, participants earned about \$4,000 (or 29 percent) more than control group members did.¹

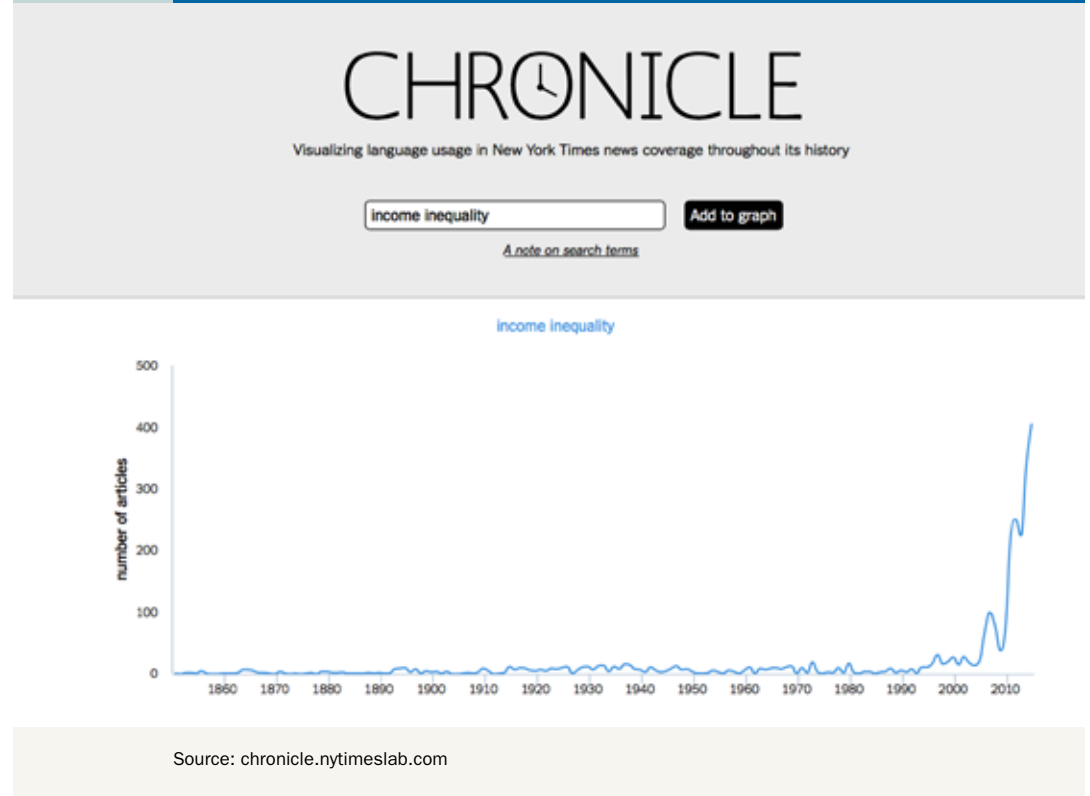
In 2013 Per Scholas launched Project Scale, an advanced IT training program to enable students to become Cisco Certified Network Associates (CCNAs), which validates their ability to install, configure, operate, and troubleshoot medium-sized routed and switched computer networks, as well as to establish TCP/IP protocols and install firewalls. Per Scholas had realized that employers were having considerable difficulty recruiting midlevel IT talent and designed Scale to respond to this demand, while also expanding Per Scholas' services to a more diverse group of job seekers, enabling them to secure jobs paying at least \$18 to \$20 an hour. Per Scholas asked Mobility to conduct an assessment of Project Scale during its initial two-year pilot phase. Our evaluation is based on interviews with staff and participants, focus groups, as well as an independent analysis of program data and participants' credit reports.

The Rising Importance of Skills

The lingering effects of the recession, along with an historic rise in income for the wealthy, have led to considerable debate in recent years. From 2009 through 2015 there was a surge of *New York Times* articles addressing income inequality (Figure 1).

Figure 1

Articles on Income Inequity in the *New York Times* Surged between 2009 and 2015

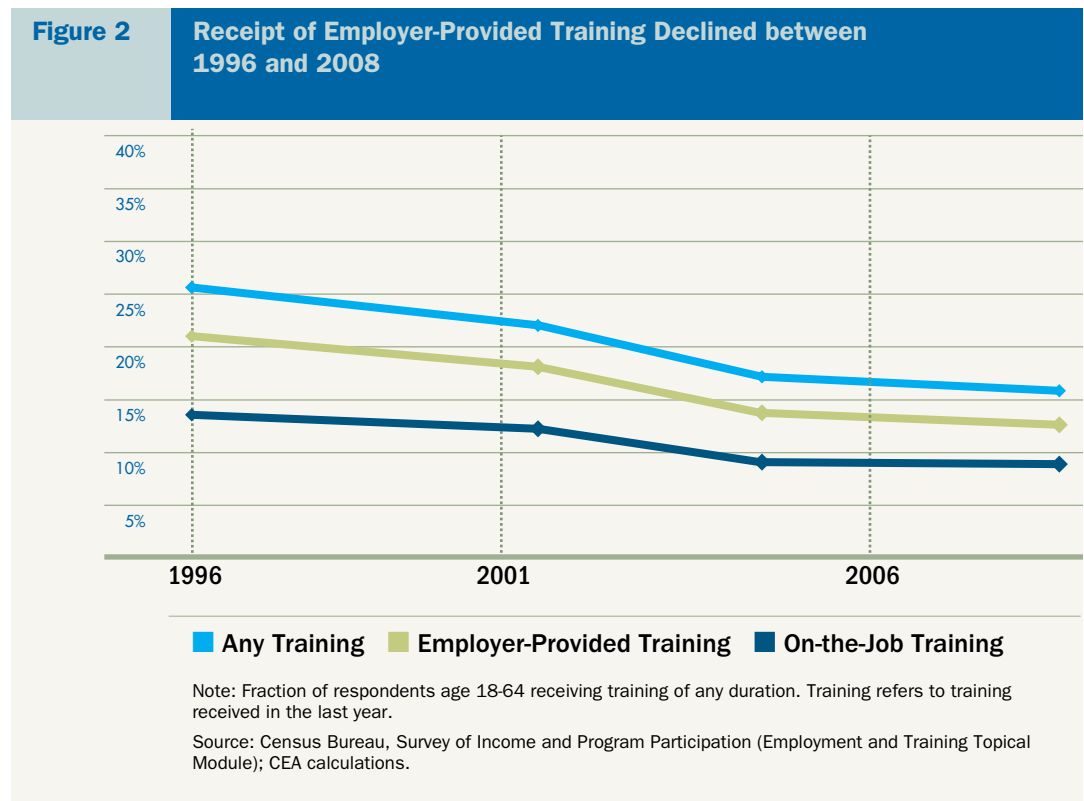


Public attention has focused most on the extraordinary increase in incomes among the top 1 percent of households and less on the stagnant incomes of the rest of the population. David Autor argues that “the singular focus of public debate on the ‘top 1 percent’ of households overlooks the component of earnings inequality that is arguably the most consequential for the ‘other 99 percent’ of citizens: the dramatic growth in wage premium associated with higher education and cognitive ability.”²

Autor calculates that the median annual earnings gap between male college graduates and male high school graduates grew from \$17,411 in 1979 to \$34,969 in 2012. The gap for women doubled over the same period, though its magnitude is less. Goldin and Katz found that the premium paid for higher education explains 60 to 70 percent of wage dispersion from 1980 through 2005.³ A study of skills in 22

developed countries conducted by the Program for the International Assessment of Adult Competencies found that people with higher skills were paid a premium in every country, and that the highest return to skill was paid in the United States.⁴

Ironically, as returns to education and skills have increased, access to skills training has declined. According to the Survey of Income and Program Participation, the share of respondents receiving any kind of training declined from 26 percent in 1996 to 16 percent in 2008, driven in large part by less employer-sponsored training (Figure 2).⁵



Publicly funded skills training has declined over the last twenty years as social welfare and job training policies increasingly emphasize a work-first approach. In 1998, the Workforce Investment Act (WIA) made a clear break from its predecessor program, the Job Training Partnership Act, by decreasing its emphasis on training as the primary means of helping job seekers secure employment.⁶ When WIA was initially implemented by states and localities, most interpreted the statutory language as requiring a work-first orientation.⁷

New York City's workforce policy followed a similar trajectory, as chronicled in a report by Mayor Bill de Blasio's administration.

Over the past 20 years, the workforce system has shifted away from job training to focus almost exclusively on job placement without any strategic focus on high-value economic sectors.⁸

The stagnant incomes of many Americans have kindled interest in public investment in education and skills. In 2014, President Obama asked Vice President Biden to lead a review of federal employment and training programs with the aim of making them more job-driven. In his introduction to the report, Biden committed the administration to working with employers in several industries to create training programs for good jobs in growing fields.

We see incredible opportunities in high-growth industries like advanced manufacturing, information technology, and health care. Many dynamic companies in these sectors aren't just expanding their workforces. They are creating jobs that pay middle-class wages. Going forward, our Administration will work with leaders in these industries to promote partnerships between education and workforce institutions in order to create training programs that help Americans succeed in these growing fields. Together, we will also work to increase the number of apprenticeships, which allow individuals to earn and learn, and empower job seekers and employers with better data regarding what jobs are available and what skills are needed to fill those jobs.⁹

In a moment of bipartisan accord, Congress passed the Workforce Innovation and Opportunity Act, which President Obama signed into law on July 22, 2014. In its efforts to engage employers in skills training, the administration highlighted the role of state and local workforce boards, which “lead sector strategy and career pathway initiatives—regional, industry-focused approaches to workforce and economic development.”¹⁰

The Technology Sector

Information technology is often cited as one of the nation's fastest-growing sectors, with good-paying jobs, many of which do not require advanced degrees. Indeed, industry credentials in the form of certificates are as important in the IT industry as diplomas.

The US Bureau of Labor Statistics projects that between 2012 and 2022 IT support will be among the fastest-growing occupations that do not require a college degree and that pay high wages.¹¹ Over this 10-year period, the bureau forecasts 196,000 job openings with an average annual pay of about \$46,000.

Sheena

Sheena was born and raised in the Bronx, just off the Grand Concourse. The oldest of six children, she learned responsibility early on.

“My mom raised us by herself. Me, being the oldest—eventually I had to help my mother raise the rest of my brothers and sisters. At a very young age I knew what responsibility was. I didn’t really have a childhood because of the responsibilities that I had growing up. Because of that I learned to be very responsible and take things seriously.”

Sheena did well, earning her associate’s degree from Katharine Gibbs School and landing a job on the Geek Squad at Best Buy. But after eight years, her position was eliminated in a corporate restructuring, and rather than move to another store, Sheena took the severance package. While discussing Sheena’s departure, a coworker mentioned that he had attended Per Scholas. Although she had one or two job offers, she decided that enrolling in Per Scholas was her best option.

Sheena was worried about being unemployed, since she has two daughters. She also had to keep up her payments on about \$10,000 in student loans. “I was worried because you don’t have a job and have a family.” Once at Per Scholas, she enrolled in Project Scale, which wasn’t always easy. “It took a lot of sacrifice. There were times I had to stay up late at night to study for exams. That was my biggest challenge—having to deal with studying while attending to my family at home.”

But Sheena completed Project Scale with flying colors, getting her A+ and Network+ certificates, and missing just one question on her CCNA exam. She remained apprehensive about the job-search process, however. “When Tiernan [Walsh, Scale’s job developer] sent us an email about jobs at Bloomberg, I didn’t go for it the first time. I felt intimidated by the name Bloomberg.” When the Bloomberg opportunity came around again, Tiernan put in an application for her.

Sheena did her homework. “Going into the building, I felt very prepared. I studied about the company. I studied what kind of questions they would ask me.” She met with five people in three different sessions, and felt the interviews went well. “I knew I had gotten the job when I walked out of Bloomberg.”

Still, when Bloomberg called two weeks later to offer her the position, Sheena broke down. “I was literally in tears when they told me I got the job and how much I was getting. I never thought there was something more for me.” Sheena’s job comes with an annual salary of \$65,000, plus health insurance, a 401(k), and more benefits than she can remember.

Her wedding had been put on hold while she was unemployed, so the offer also meant that she and her long-time boyfriend could get married.

Sheena started work in late 2014. “So far the feedback I get from them is really good. I’m happy that I’m doing a good job and I just want to get better.” She hopes to continue her studies and become a network engineer.

Sheena’s supervisor at Bloomberg, Candy Ho, agrees. “So far, so good. All the skills she has on her résumé have been very relevant to our work. [Sheena’s] definitely someone who is very eager to learn. The best thing is that she’s very open to asking questions.”

Succeeding at Bloomberg is not easy, Ho says. “It’s a very fast-paced environment. In terms of what she does, she’s going to run into people who are very demanding. So far she has been doing great under the pressure.”

Update: Sheena is doing well at Bloomberg and was married in May 2015.

This predicted national expansion is especially promising for New York City, where employment in computer-related occupations is projected to grow by 22.1 percent during this time, according to the New York State Department of Labor, far surpassing the overall employment growth of 13.2 percent.¹² This growth builds on the remarkable expansion of the city's IT sector over the past decade.¹³

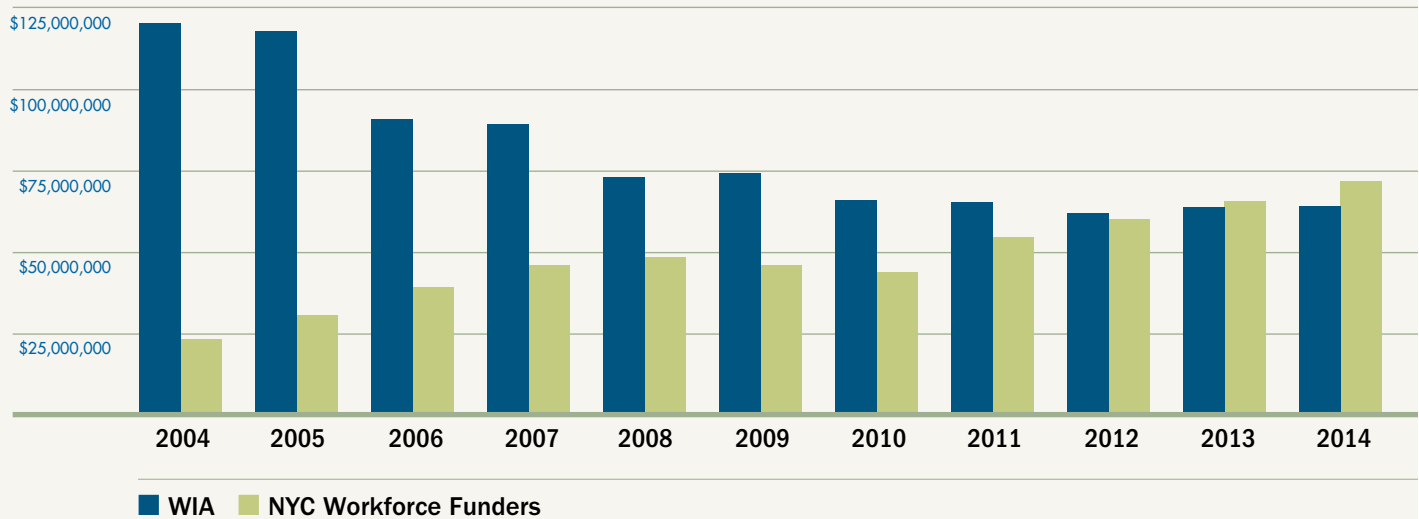
- New York City's technology sector employed 117,147 people in 2014, up 71 percent in since 2004.
- Despite rapid growth, there have been relatively few opportunities for Blacks or Hispanics; 78 percent of all workers in New York City tech jobs are white or Asian.

Launching Project Scale

For many years, New York City was unable to use much of its federal WIA funds to promote skills training.¹⁴ As required by the Department of Labor, the New York City Department of Small Business Services (SBS) used most of its WIA resources to support Workforce1 career centers, which emphasized rapid attachment to employment. In fiscal year 2015 (July 1, 2014–June 30, 2015), SBS reported that a little over 2,000 people enrolled in training, with 1,509 receiving vouchers. The several hundred Workforce1 customers that did receive skills training received vouchers to attend training from a set of state-approved institutions—for-profit vendors, educational institutions, and nonprofit organizations. Security guard training accounted for 47 percent of the vouchers issued.¹⁵ Despite the WIA's regulatory constraints, SBS created three sector-based career centers between 2009 and 2010, which gave more priority to training. SBS also partnered with the New York City Workforce Funders (an affinity group of private foundations) to create the New York Alliance for Careers in Healthcare, an initiative designed to work with employers, unions, educational institutions, and training providers to address skills gaps in the health-care sector.¹⁶

The combination of a work-first approach and a decline in WIA funds between 2004 and 2014 meant that most local nonprofit organizations that conducted skills training could not depend on the WIA and instead relied primarily on grants from New York's private foundations. As **Figure 3** shows, WIA funds have declined by more than 50 percent in real terms since 2004, when they far exceeded New York City Workforce Funders grants for workforce development. As WIA funds fell, foundation giving for adult and youth programs increased steadily, such that by 2013 foundation grants surpassed WIA funds for the first time.

Figure 3 As Federal WIA Funds Declined, Foundation Funding for Workforce Development Rose in New York City (2015 Dollars)



Source: Mobility analysis of data from the New York City Workforce Funders

In 2012, SBS allocated one-time surplus funds for promising skills-training initiatives. A strong interest in the burgeoning technology sector led SBS to contract with the Borough of Manhattan Community College (BMCC) and Per Scholas to develop a technology training program.

Through this partnership, a new program called Project Scale was launched to prepare participants to be CCNAs. From Per Scholas' perspective, Scale is a model of collaboration between the city's Workforce1 career centers and BMCC. In its program description, Per Scholas elaborated on the importance of this relationship:

Through this collaboration the partners will share the burdens of recruiting and instruction, using Per Scholas' model as well as their own infrastructure and resources. We hope to demonstrate that by cooperating in this way, we can create an inherently cost-effective new program model and best practices for scaling our services to reach many hundreds if not thousands more individuals.¹⁷

Per Scholas banked on the career centers recruiting and screening potential Scale candidates from the thousands of unemployed and underemployed people that sought their services each year, thereby improving these individuals' employment prospects while reducing program costs.

Project Scale had ambitious goals, especially for a pilot program:

- Of the 120 students to be enrolled, 105 were expected to graduate and 95 of these would be placed in jobs paying at least \$20 an hour.
- 95 graduates would pass both the A+ and CCNA certifications.
- Program costs per student would be less than \$5,000, about 20 percent below Per Scholas' current expenses for its IT-Ready program.

Beyond these specific quantitative goals, Per Scholas hoped that the initiative, if successful, would result in public training resources being used less on vouchers for training and more on cohort-based models, like Scale's.

Program Structure

Project Scale is an 18-week, full-time program that begins with eight weeks at Per Scholas, in the South Bronx, during which participants learn to configure and troubleshoot desktop and laptop computers, printers, network devices, and mobile devices, and ultimately obtain CompTIA's A+ certification. Participants who pass the A+ certification continue with ten weeks of training at BMCC, in Manhattan, culminating in the CCNA certificate, which requires mastering the skills needed to install, operate, and troubleshoot small to medium-sized enterprise networks.

Classes are held Monday through Friday from 9 a.m. to 4 p.m. Four days each week are devoted to technical training and the fifth to life skills, such as developing résumés, honing job search strategies, and practicing interview skills.

Scale makes its high expectations clear from the beginning, telling participants to treat the program like a job by attending consistently, dressing appropriately, and behaving as they would at work. A single lateness during the first three weeks results in immediate termination, as do three absences over the program's entire 18 weeks.

Recruitment

All Per Scholas applicants complete a rigorous assessment that includes the Test of Adult Basic Education (TABE) as well as an evaluation of their knowledge of computer networking. Generally, applicants who are considered for Scale score over 11 on the math portion of the TABE, have a year or more of prior IT experience, and can correctly answer at least half of Per Scholas' computer networking questions. Several Per Scholas staff members then interview applicants one-on-one, followed by a panel session for later cohorts in which a group of up to 20 candidates are interviewed simultaneously by three or four staff. In these sessions, candidates

sit around tables arranged in a large hollow square and each gives a one-minute response to five questions, such as “Name one IT skill that you have that would be an asset to you in the program.” The panelists give candidates a score for each answer. Candidates with the best total scores are offered admission.

Recruitment proved challenging from the beginning. The anticipated collaboration with the Workforce1 career centers never materialized, as the centers felt they could not grant Per Scholas special access to their clients without allowing other organizations the same privilege (Per Scholas was allowed to leave program flyers). Per Scholas had also expected to find a large number of Scale students among the hundreds of qualified applicants for its IT-Ready program. This proved optimistic: Tony Gaston, then the program’s manager, estimated that only one out of 50 applicants deemed appropriate for Per Scholas’ regular A+ training program was appropriate for Scale. Per Scholas also opened the program to IT-Ready alumni; a flyer emailed to 200 graduates yielded just three applicants.

In addition to identifying candidates in the IT-Ready applicant pool, Per Scholas launched an aggressive online marketing campaign using Facebook, Facebook ads, Twitter, Google ads, and Craigslist. In September 2013, Per Scholas reported that of the 200 people who had submitted online applications, 30 had visited Per Scholas, and, of those, four had been deemed appropriate candidates for Scale.

Scale’s original plan included classes of 20 to 22 students in each of the cohorts, beginning in October, January, March, and May. The recruiting challenges meant that start dates kept being rescheduled at the last minute. The first cohort came together almost miraculously, while postponements of the second caused at least five candidates to drop out. Pressure to fill the second cohort may have resulted in a lowering of admission standards: three of the 19 people who started the program quickly dropped out. After continued difficulty recruiting the third cohort (which ended up starting in October 2013), Per Scholas decided to postpone the fourth, which was scheduled to begin in January 2014, until April of that year. Despite these challenges, Per Scholas was ultimately able to exceed the initiative’s recruitment goals, enrolling 124 students in Scale.

In focus groups, most students said they had learned about the program online—Per Scholas’ ads came up when they searched for jobs or for information technology training. Many had not heard of Per Scholas but liked that the training was free. A few reported that they had heard of the organization through a friend or work colleague and decided to give it a try. Per Scholas’ extensive recruiting efforts resulted in students coming from all five boroughs of the city, with most from Brooklyn, Manhattan, and the Bronx (**Figure 4**).

Figure 4

Project Scale Participants Came from All Five Boroughs of New York City



Note: The dot size increases with the number of people residing in the zip code, ranging from one to five. Map created at gpsvisualizer.com.

Many Scale Participants Face Daunting Financial Challenges

Nearly nine out of 10 Scale participants were male and the majority were 25 to 39 years old when they enrolled. Nearly 90 percent of students were members of minority groups, with the majority Black or Hispanic (Figure 5). About half had earned an associate's degree or higher, while the other half held no more than a high school diploma or GED (Figure 6). More than three-quarters of students were unemployed when they enrolled, and 23 percent reported that they had not worked in more than a year (Figure 7).

It was clear from participants' credit reports that when they enrolled in Scale, many were in precarious financial circumstances. Just under half of Scale students had no credit score or a subprime score (Figure 8). Either situation would prevent them from being offered credit or obtaining credit at favorable rates. While the use of credit reports by employers has been strictly limited in New York City by legislation enacted in 2015, landlords often use credit reports to screen prospective tenants, and utility and cell phone companies generally require customers with poor credit to make substantial cash deposits.

Figure 5 More Than Two-Thirds of Participants Were Black or Hispanic (N=124)

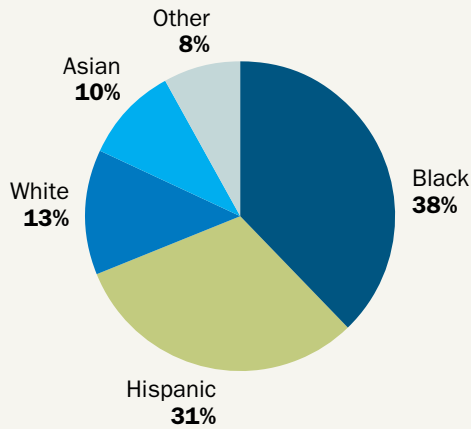


Figure 6 About Half of Participants Had Only a High School Diploma or GED (N=124)

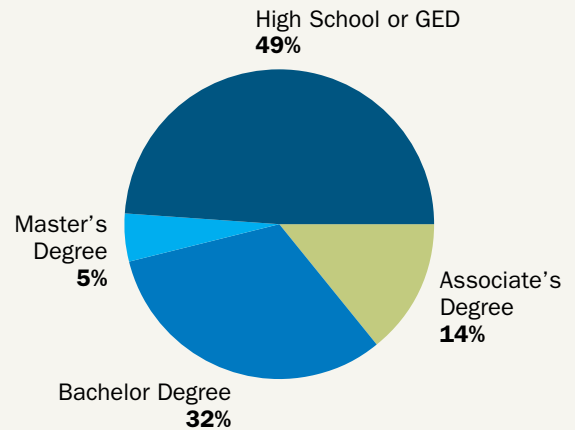


Figure 7 Just Over a Third Had Been Unemployed for Six Months or Longer (N=124)

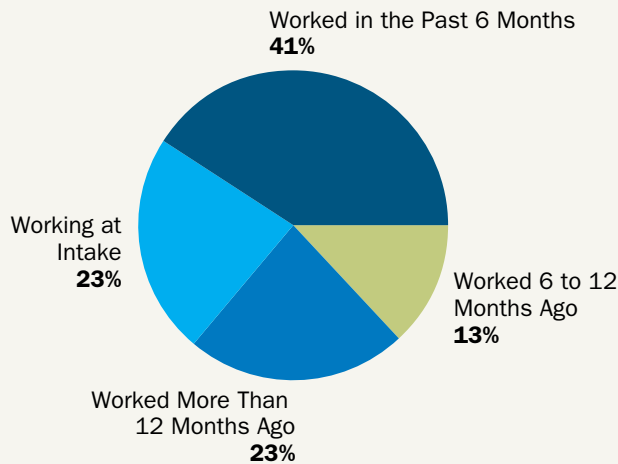
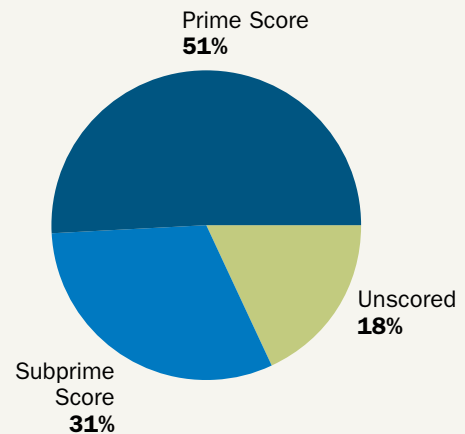


Figure 8 Nearly Half of Participants Had a Subprime Credit Score or No Credit Score (N=108)



Analysis of participants' credit reports revealed that many had large financial obligations (**Figure 9**). Over 80 percent were carrying some form of debt, with the median amount owed over \$13,000. (Some students with very large debts drove the average owed to nearly \$39,000.) Forty percent of these participants had some debt that was past due. The most common forms of debt were credit cards (held by 67 percent, with a median debt of nearly \$2,300) and student loans (held by 41 percent, with a median debt of more than \$16,000).

Figure 9		Participants Had Substantial Debt (N=108)			
	Percent of all who had debt	Median debt among those with any debt	Average debt among those with any debt	Percent of those with debt who had any past-due amount	
Any trade account debt	82%	\$13,397	\$38,822	40%	
Credit card debt	67%	\$2,293	\$5,522	26%	
Student loans	41%	\$16,125	\$30,556	30%	
Auto loans	8%	\$8,594	\$8,543	33%	
Mortgage	6%	\$222,587	\$211,361	29%	
Other loans	6%	\$9,934	\$11,208	29%	

Analysis of students' debts by their credit scores revealed which students were in the most financial difficulty (Figure 10). Just three of the 19 unscored students had any debt reported on their credit reports. Almost all of the students with credit scores of 700 and above had debt, but their debts were modest, and only 3 percent had any debt that was past due. However, students with subprime credit scores (below 620) had substantial debt, and four out of five of this group had debt that was past due.

Figure 10		Debt Levels Varied by Credit Score (N=108)			
Trade account debt excluding mortgages	Percent of all who had debt	Median debt among those with any debt	Average debt among those with any debt	Percent of those with debt who had any past-due amount	
Unscored (N=19)	16%	\$154	\$3,450	33%	
Score below 620 (N=34)	97%	\$13,397	\$27,197	79%	
Score 620 to 699 (N=20)	100%	\$12,094	\$27,162	35%	
Score 700 or above (N=35)	94%	\$3,873	\$15,896	3%	

Program Participation and Support

Many students needed support from Per Scholas' staff, particularly their career coaches, Tony Gaston and Steven Nunez, over the course of the 18 weeks. For issues beyond their capacity, the coaches referred 49 students to other organizations for help with food, transportation, financial problems, public benefits, and business attire. They also worked with students every Friday to help them write their résumés, develop job search strategies, and practice their interview skills. Despite participants' considerable work experience and education credentials, many needed substantial support of this kind, even as they neared graduation.

Staff explained that mock interviews conducted by employees from Barclays, Accenture, and Bloomberg could be transformative, and many students took preparation very seriously as the interviews approached.

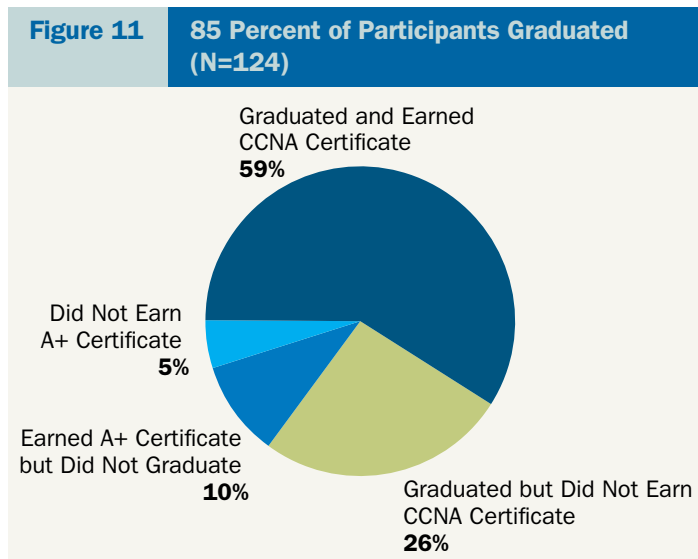
The program structure—with the first eight weeks at Per Scholas, in the Bronx, and the last 10 weeks at BMCC, in lower Manhattan—was new and required considerable coordination among Per Scholas and BMCC staff, particularly Chris Viteritti, BMCC’s CCNA instructor. Whenever Mr. Viteritti saw behavior issues among students, he called Tony Gaston or Steven Nunez. To resolve a confrontation in the second cohort, for example, Mr. Gaston came to BMCC and the offending student was dismissed from the program that afternoon.

Mr. Viteritti believed that Scale students’ technical skills were comparable to those of students who were taking CCNA courses for credit at BMCC, but that Scale students were a little more eager to learn—perhaps, he proposed, because they were unemployed.

Students felt that the two parts of the program provided very different experiences, though they shared that the logistical transition from the Bronx to Manhattan was not a problem. Students felt that the A+ portion was fairly easy—at least in comparison to the CCNA class, which nearly all found fast-paced and technically challenging. Students reported that they had to devote considerable time outside of class to keep up with the pace of the CCNA training, by working in groups, watching videos, and doing reading online. Many students in the first cohort believed they were not well prepared for the CCNA portion of the class and that less time should have been devoted to the A+ segment. Per Scholas staff realized this was an issue and revamped the A+ training, adding a networking and pre-CCNA component for the last two weeks. Later cohorts expressed none of these concerns and, in fact, were appreciative of the staff’s efforts to improve the program. One focus group participant reported the following:

One of the things I like—I found out that the next class, the staff, they’re thinking about making a change for the next class. They’re always willing to adapt to make the next class better. From the first Project Scale class and the second, we learned a lot. I feel like the classes are just going to get better.

Despite its rigorous schedule—five days a week for 18 weeks—Scale experienced little attrition. Per Scholas had a zero-tolerance policy for the first three weeks—arriving a few minutes late on a single day resulted in immediate termination. Despite this expectation, just 5 percent of Scale students failed to complete the first eight weeks of the program, including passing the A+ certification exam. Overall, 85 percent of students graduated from Scale, and 59 percent earned their CCNA certificate ([Figure 11](#)).



Job Development

When Scale students transitioned to BMCC, they also started working with Per Scholas' job developer, Tiernan Walsh—first as a group, then one-on-one. Mr. Walsh had worked at Robert Half, an international staffing firm, prior to joining Per Scholas, in 2011, and he brought a decidedly private-sector approach to developing his contacts in the IT industry. Instead of cold-calling firms one at a time, Mr. Walsh purchased several lists with industry contacts and used Per Scholas' management information system to email introductory letters to 400 people per day. Typically up to 15 of the 400 contacts would respond, and four or five wanted to talk further. Mr. Walsh worked assiduously to turn these leads into relationships. He preferred to meet at their firms so he could get a sense of their company's organization and culture. During the meeting he would do his best to ascertain the size of the company's IT department, number of locations, departmental structure, software used, and the challenges the company was facing. Mr. Walsh would then explore what kinds of positions were open: interns, contract workers, or full-time employees.

Most employers Mr. Walsh worked with were managed service providers, which remotely manage companies' IT departments, including help-desk and network support. His pitch to employers was straightforward:

- I can provide you with some great talent.
- I know each candidate inside-out, as staffing firms don't.
- I won't charge you a fee.

Typically Mr. Walsh did not highlight the charitable nature of Per Scholas' work, though he said it did appeal to some employers. Once he had a job order, he would work with Scales' life skills coach to determine which Scale students were the best match for that job. He used a five-point grading system to assess the following qualities:

Impact of Student Loans on Students' Success

Overall, 41 percent of Per Scholas' Project Scale participants had student loans, with an average debt of \$30,556. Participants with college degrees were slightly more likely to have student loans than those without degrees, but the amount owed was considerably higher: \$42,583 versus \$16,123. Thirty percent of all participants with student loans had any that were past due, and those without degrees were far likelier to be late on their loan payments ([Figure 12](#)).

Participants with student loans, regardless of whether they were past due, were less likely to become CCNA certified, as indicated in [Figure 13](#). College graduates with student loans that were past due were far less likely to become certified.

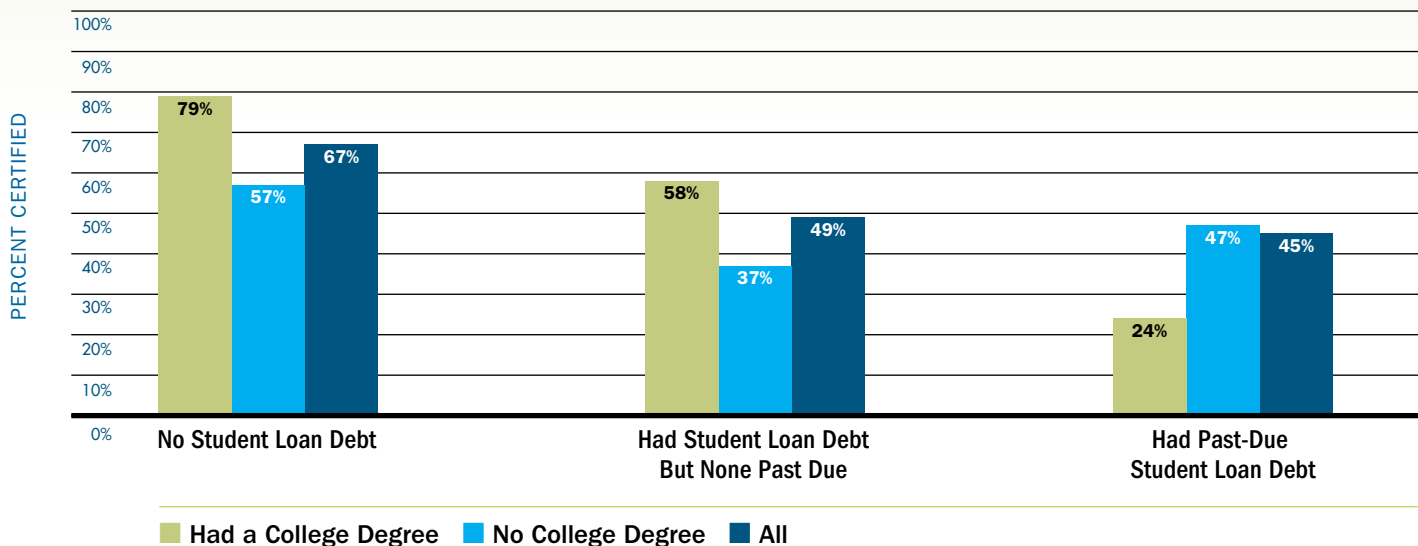
As workforce development organizations become more sophisticated about addressing participants' financial needs, it will be critical to identify people with student loans, especially those that are past due. In many cases, payments can be postponed while students are in training or unemployed. And in some cases it may make sense for students to shift from standard to income-based repayment plans.

Figure 12 Student Loan Debt Averaged More Than \$30,000

	Had a college degree (N=54)	Did not have a college degree (N=54)	All (N=108)
Percent with any student loan debt	44%	37%	41%
Average student loan debt among those with any debt	\$42,583	\$16,123	\$30,556
Percent of those with student loan debt who had any past due	17%	45%	30%
Average past-due student loan debt among those with any debt	\$20,884	\$9,365	\$12,909

Differences in average student loan debt significant at $p < .01$ and in the percent with past-due student loan debt at $p < .05$.

Figure 13 Participants with Student Loans Were Less Likely to Obtain CCNA Certification



Difference between college students with past-due student loan debt and college students without student loans significant at $p < .01$.

- technical skills
- ability to be a team player
- good attitude
- presentation skills
- communication skills

Candidates included program graduates as well as students nearing graduation. When an employer expressed interest in Per Scholas' students, Mr. Walsh would set up the interview and prepare the students (generally, he sent three students to each interview). Mr. Walsh expected the students to know three things cold:

- the job specifications
- everything about the company (through online research)
- everything about the person interviewing them (through LinkedIn)

On the day of the interview, Mr. Walsh asked each student to text him that they were on their way and email him afterward with how they thought the interview went and what questions they were asked. He would then follow up with the employer.

Mr. Walsh is trying to change the job development model so the students are tasked with finding their own jobs. He told the second Scale class that eight weeks before graduation they had to post their résumés to 10 to 15 job boards and send them to at least 10 staffing agencies. Although this was easy to do, he found that very few students actually completed the task. He felt that the students were slow off the mark as they were not focused on employment yet.

Analysis of Program Performance

Certification

As noted above, 95 percent of enrolled students attained the A+ certification, which was required to continue on to the CCNA portion of the course. After the third cohort, Per Scholas considered shifting from the A+ certification to Network+, which was considered better preparation for the CCNA training. When informed that this would require rewriting its contract with the city, Per Scholas stuck with A+, and encouraged students to prepare for the Network+ on their own. Many students did, and 87 percent of students after the third cohort obtained the Network+ certification.

Passing the CCNA test proved more challenging, with 59 percent of all participants and just over two-thirds of program graduates becoming certified. While Scale had high standards for admission, students brought a range of education, skills, and prior work experience. Analysis of program data revealed that the students were more likely to become CCNA certified if they had a bachelor degree or higher, scored higher on the TABE, or had more IT experience (**Figures 14 through 16**). Students with past-due debt were much less likely to complete the training and obtain their CCNA certificate than students without past-due debt (**Figure 17**).

Program design may have played some role in the low certification rates. For the first cohort, Per Scholas held graduation before many students had scheduled their CCNA exam, let alone taken it. After the second cohort, this policy was changed, and students had to have taken the exam before they could graduate. Students in the early cohorts were also sent on job interviews before graduation, and some received offers before they had taken the exam, reducing their incentive to become certified. After the third cohort, Per Scholas made sure to schedule employment start dates after students had taken the CCNA exam.

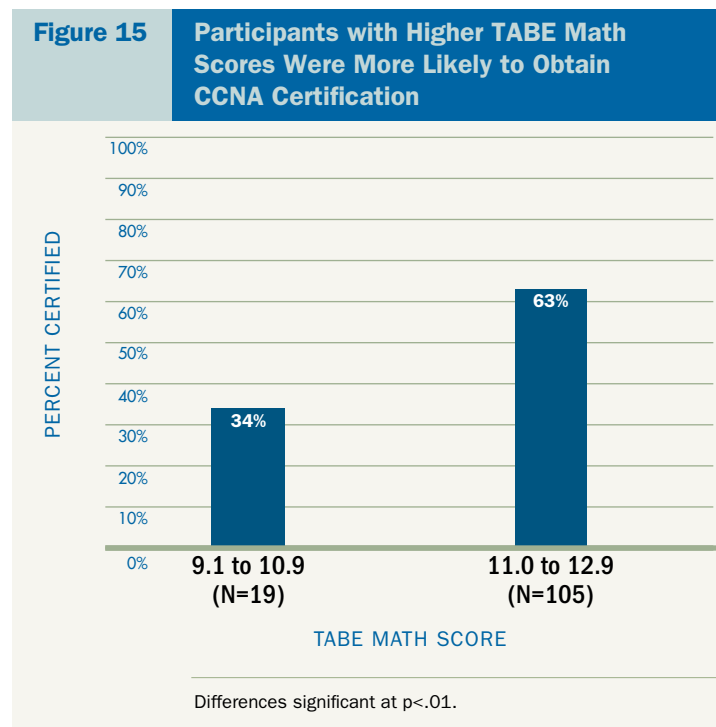
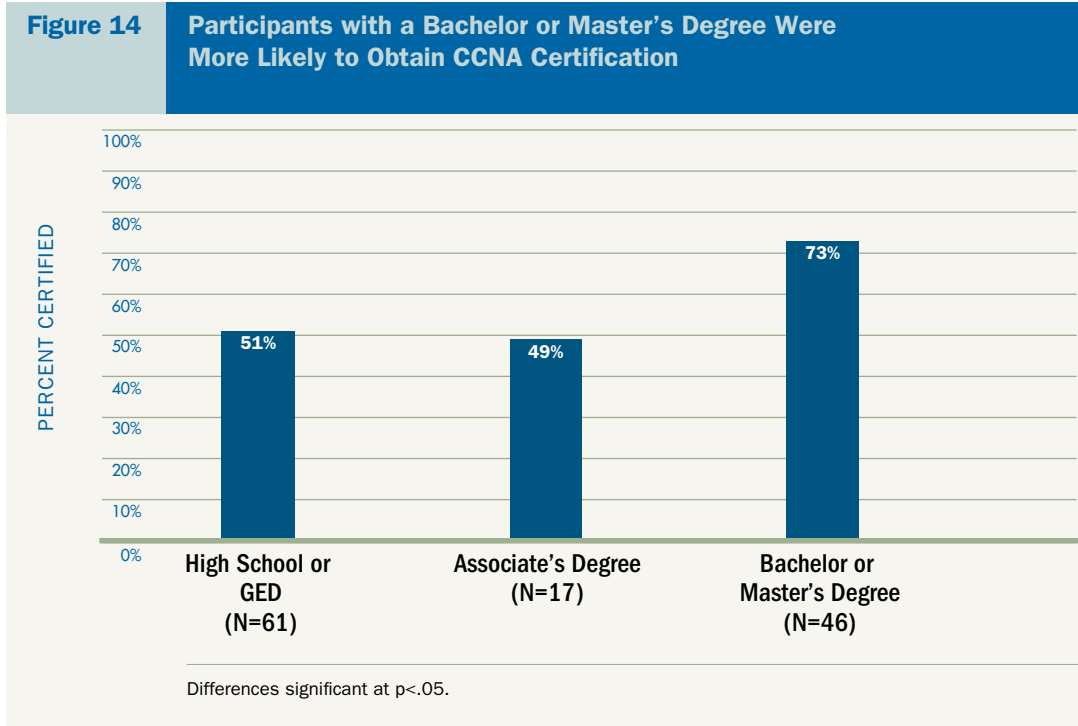


Figure 16 Participants with Three or More Years of IT Work Experience Were More Likely to Obtain CCNA Certification

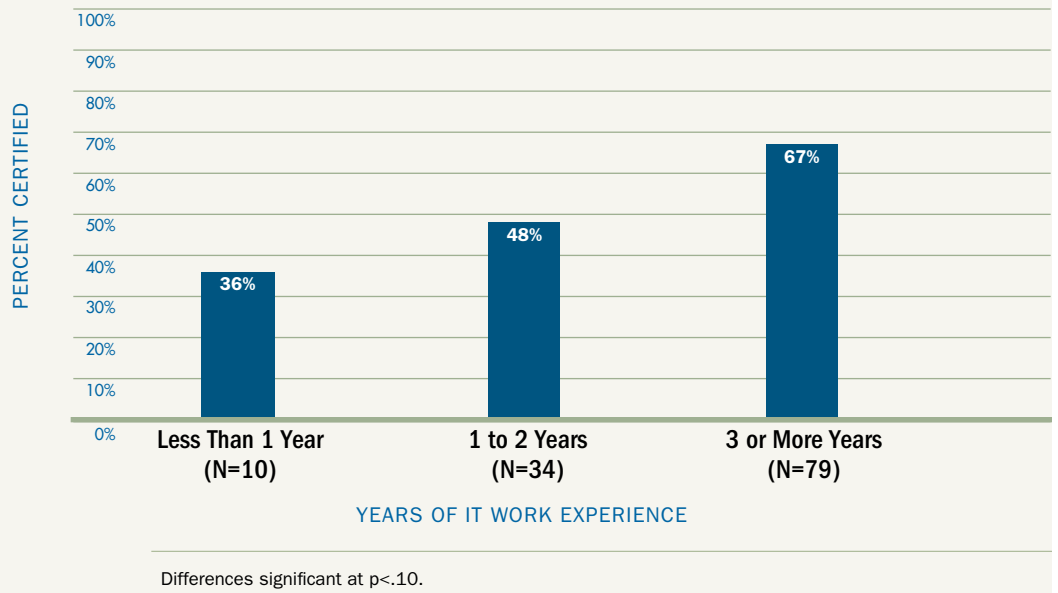
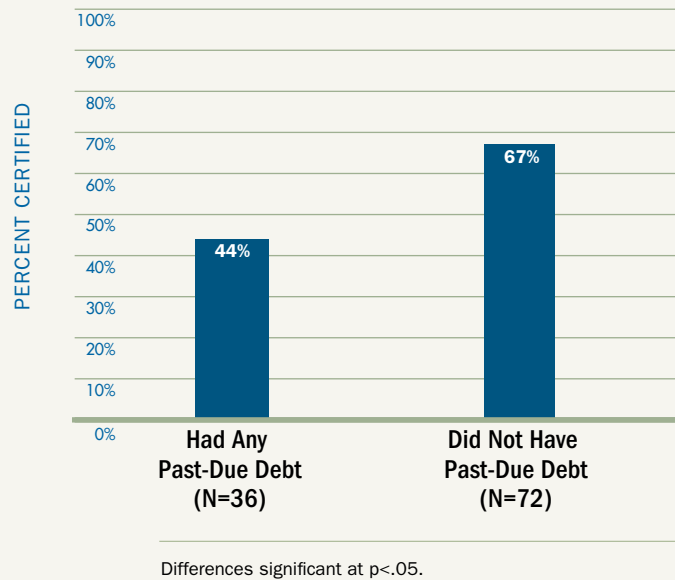
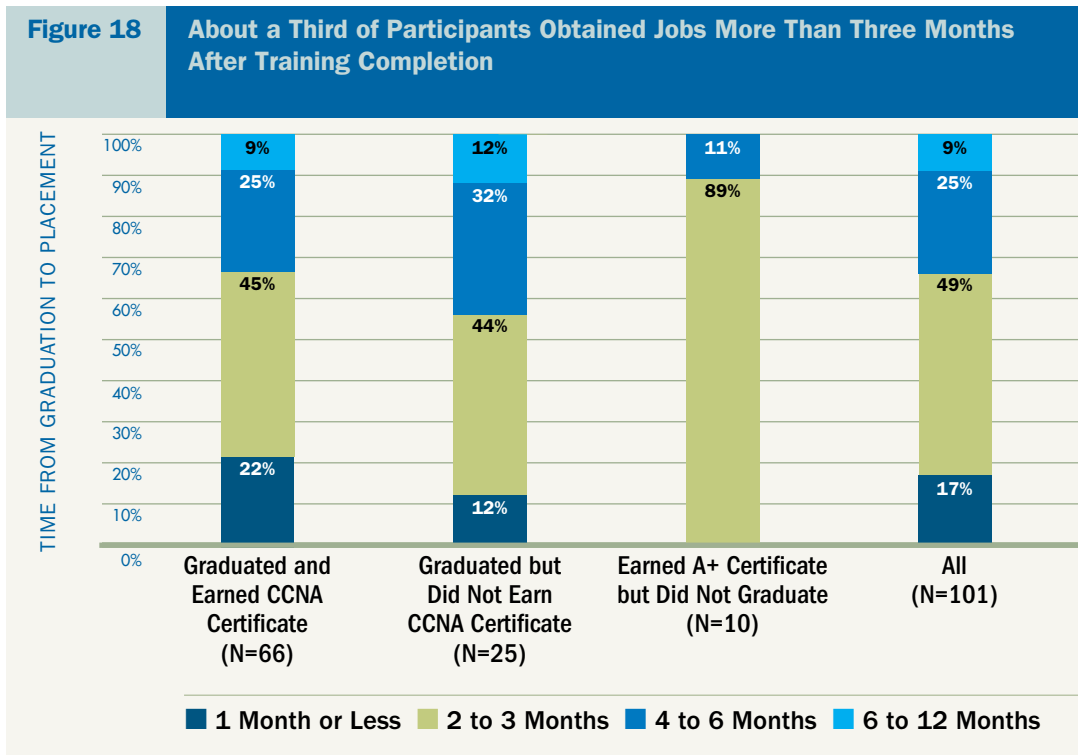


Figure 17 Participants with Past-Due Debt Were Less Likely to Obtain CCNA Certification

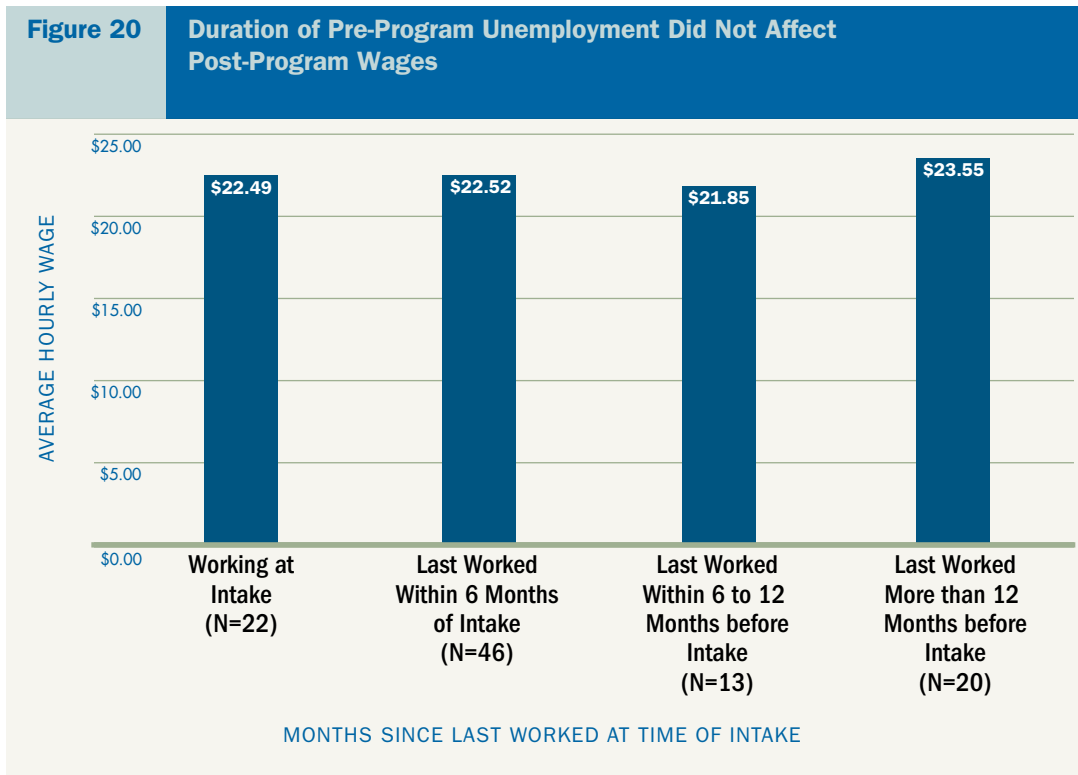
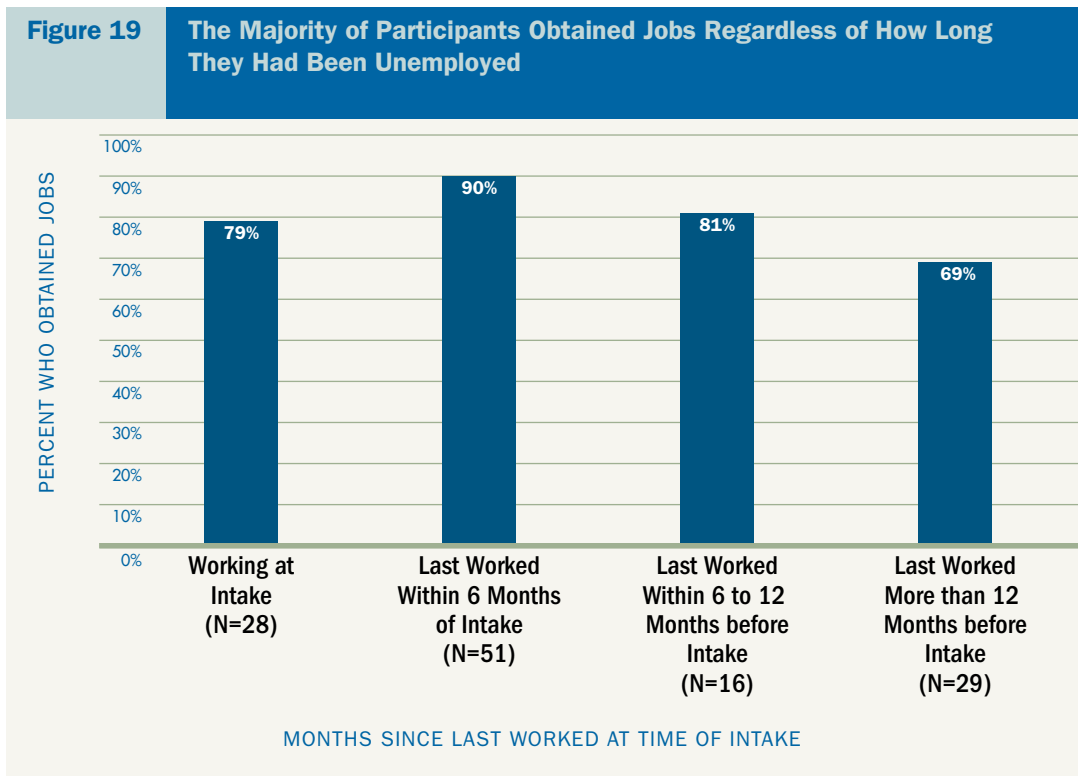


Employment and Wages

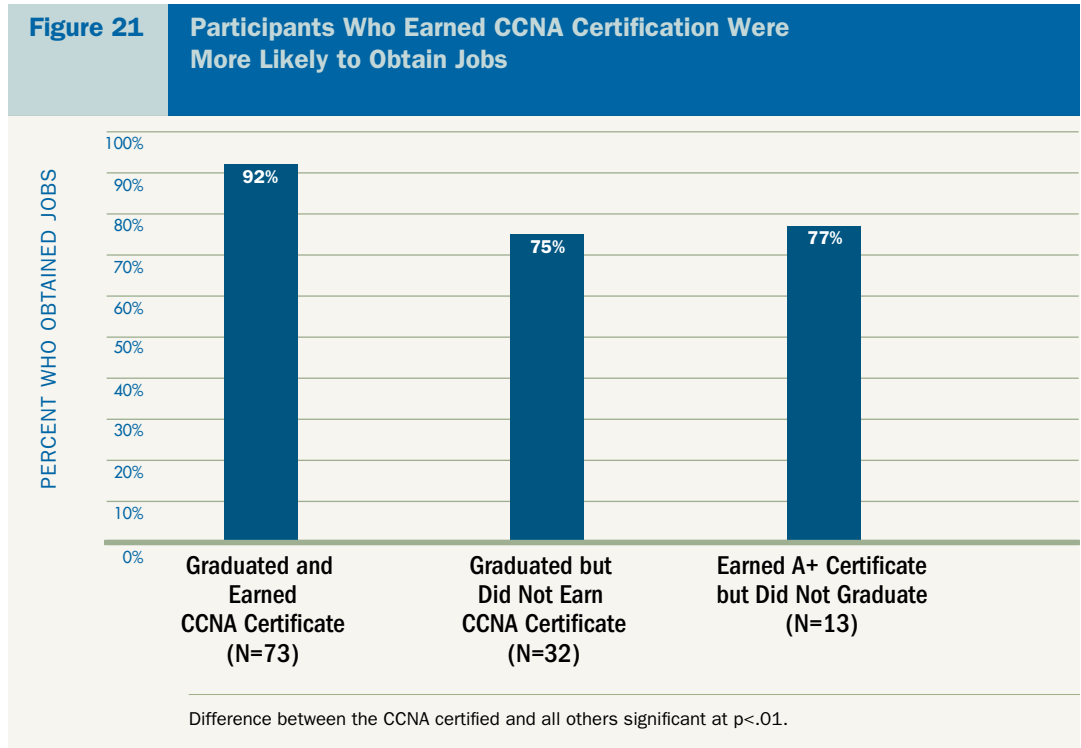
Despite these challenges, over 80 percent of students who enrolled in Scale, including 87 percent of graduates, obtained employment (as verified by Per Scholas with the employers; others may have found jobs that Per Scholas could not verify). While most students who earned at least the A+ certificate were employed within three months of training completion, it took over a third of students four months or more to land a job (Figure 18). Scale graduates earned an average of \$22.63 per hour in their most recent job, which was about \$3 an hour more than they had earned in their last job before enrolling in Scale. Nearly all of those working were working full-time—just 3 percent obtained part-time positions. As a result, Scale participants were working an average of 38.2 hours weekly, about 4.5 more hours per week than they had prior to enrolling in the program.

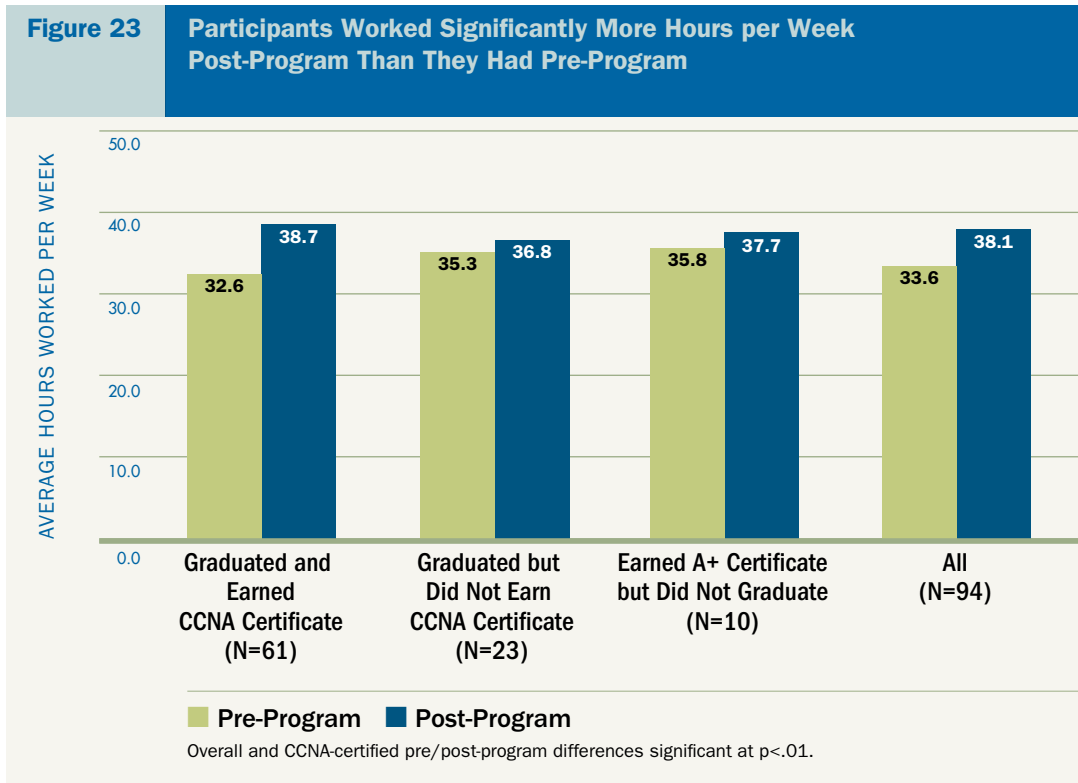
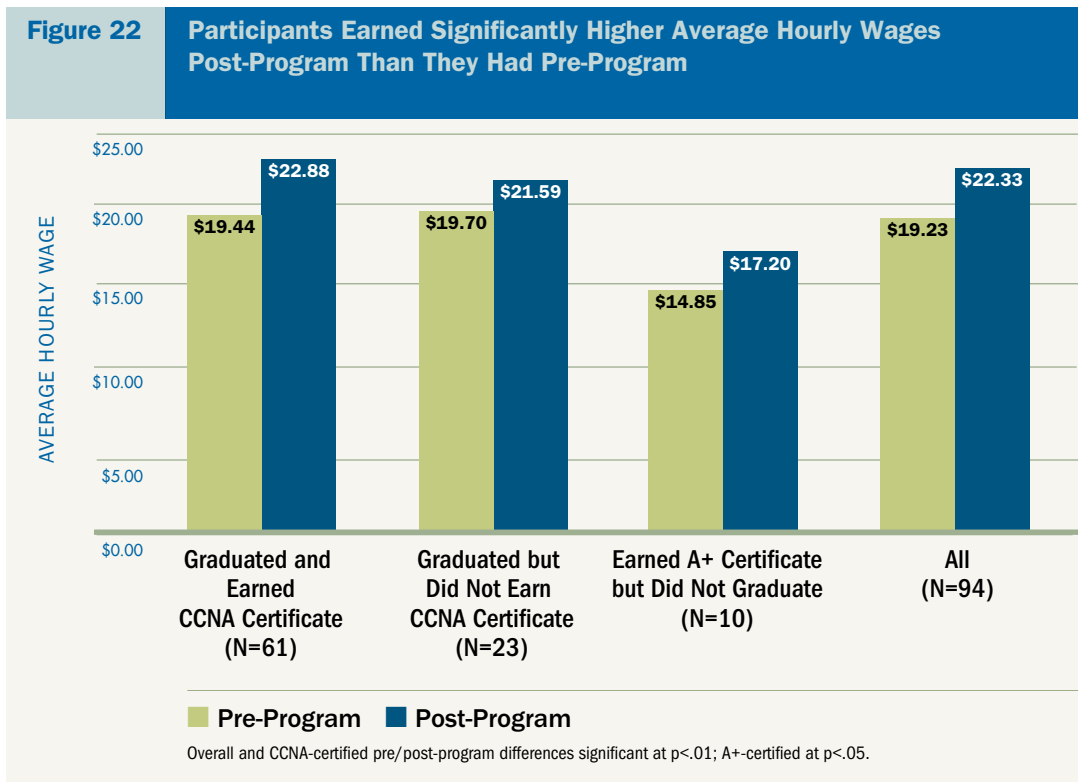


Per Scholas was able to place the majority of students in jobs, regardless of how long they had been unemployed prior to enrolling—including 69 percent of those who had been out of work for more than a year (Figure 19). It is worth noting that those who had been out of work the longest earned the highest average wages after the program: \$23.55 per hour (Figure 20).



While most Scale students secured employment regardless of whether or not they graduated, analysis of placement records shows that graduating and earning the CCNA certificate were meaningful. Per Scholas' data indicate that students who obtained their CCNA certificate were more likely to obtain a job than those who did not (Figure 21). Those who were CCNA certified were also able to command a premium in the labor market and were working the most hours (Figures 22 and 23). In contrast, students who left Scale with just the A+ certificate earned considerably less (though still more than they had prior to enrolling).





Kristian

Kristian's first experience with Project Scale did not end well.

"They have a zero-tolerance policy at the school for tardiness. For the first three weeks you cannot be one minute late. On the last day I was running a little late—I missed my bus. The second bus, which I rely on for my backup, didn't come. So I started running from Broadway and 135th Street in Manhattan all the way to Per Scholas, which is in the Bronx. While I'm running I call Steven [Nunez, Kristian's career adviser] and tell him I might be late. He says, 'Keep going'...I wound up being, like, seven minutes late. Steve says it was fifteen, but I think it was seven. But anyway, it doesn't matter. I was still late, regardless."

Steve sat him down and told him the bad news. "You can't continue. You're going to have to leave."

"That hurt. That was pretty bad. But I was really persistent about a second chance. [Steve] said, 'You can come back.' I was really grateful for that. That kept me motivated to keep trying."

Before enrolling in Project Scale, Kristian had worked part-time in IT services at Tek Systems. He was paid pretty well, earning between \$16 and \$20 an hour, depending on the job, but the work was erratic as he was a contractor. "I was struggling because I didn't have consistent income."

Kristian had attended several community colleges, accumulating around \$5,000 in student loans, but had never gotten a degree. "After high school I didn't know what I wanted to do for college, so I was never able to complete it. Without the funds or a stable living situation, I couldn't finish college."

Someone at Tek Systems recommended Per Scholas. And when Per Scholas dismissed him, Tek Systems had work for him—enough that he could even save some money before he reenrolled in Scale two months later.

Kristian's first experience at Scale proved invaluable, as he knew a lot of the first weeks' material and was able to stay ahead of the curriculum; he was even named his cohort's top student. "I was able to be a leader in the class. That was really nice. I'd never been the valedictorian of anything: a good accomplishment. I was very proud. My dad was very proud of me."

Even before graduation or taking the CCNA exam, Kristian landed a job in a midtown Manhattan company that provides outsourced IT services to businesses and nonprofit organizations. Kristian learned of the job through Tiernan Walsh, Scale's job developer. He had been well prepared through mock interviews with Barclays as well as several phone interviews. "I was very prepared for the interview because of Steve's work and all the preparation involved and the knowledge from the class. That knowledge really showed in the interview and helped me get the job." Kristian was surprised at how quickly he landed a job, which started a week before he took the CCNA exam. The job was full-time and paid about \$40,000 annually, with benefits and a 401(k). Kristian provided a wide range of IT services to architecture firms, doctors' offices, and a recruitment firm, usually working remotely from his office.

After seven or eight months, his supervisors at the company let Kristian go, saying they had been expecting more growth out of him. Although he had passed the CCNA, A+, and Network+ exams, they had expected him to pursue additional training at his own expense, which he had planned on doing but had not gotten around to.

Kristian is collecting unemployment benefits while pursuing his next opportunity. He has been on several interviews and he is now sure to ask exactly what he can expect from the company and what they will expect from him.

Conclusion

Over the course of the Project Scale pilot program, Per Scholas faced many challenges, as is expected with a new program. Some challenges remain, of course, and will need to be addressed as Scale matures.

- Recruitment remained difficult throughout the pilot despite the staff's aggressive efforts to generate interest. There is considerable demand for CCNA training in New York City, as reflected by the number of companies and educational institutions offering courses.
- Participants with college degrees, strong math skills, and more years of IT experience were more likely to earn their CCNA certificates and secure employment than other Scale students. Students who were under less financial strain were also more likely to graduate and obtain certification. Per Scholas will need to identify and provide support to participants with educational and financial challenges to enable them to succeed at similar rates.
- Just over two-thirds of graduates earned their CCNA certificate. Given the importance of certification to graduates' continued education and long-term labor-market success, certification should be required in order to graduate.
- Scale proved more expensive than Per Scholas had anticipated, averaging about \$8,200 per participant (compared to \$6,500 for IT-Ready). Higher-than-expected recruiting costs were a major factor.

Despite these challenges, by every indication Project Scale is a promising program. It is rare for a new program to attain such high performance levels right away. Nearly 90 percent of students who graduated or obtained certificates got jobs—typically full-time and at wages over \$20 an hour.

- On average, Scale students' wages were 15 percent above what they had earned prior to enrolling in the program.
- Ninety-seven percent of employed participants were working full-time either in permanent or contract jobs, which meant that, on average, students were working 10 percent more hours more per week than they had in their last job.
- Nearly 80 percent of students were unemployed when they enrolled and 36 percent had been out of work for six months or more. Per Scholas demonstrated that it could place students regardless of how long they had been out of work.
- As the IT sector looks to diversify its ranks, Scale (and Per Scholas generally) offers an important pipeline of Black and Hispanic candidates.

Scale also demonstrates that Per Scholas is deepening its work as a sectoral employment organization and is targeting the kind of “middle-skill” jobs that economists have been promoting.¹⁸ Scale not only offers a new training track for

higher-skilled applicants, but it also engages employers in a way that Per Scholas' IT-Ready program alone cannot. By collaborating with a community college for the first time, Per Scholas was also able to test a program model that can be readily adapted for other occupations and jurisdictions.

Scale's Future

In many ways, Scale was launched at the perfect time. As President Obama said in his 2015 State of the Union address,

To make sure folks keep earning higher wages down the road, we have to do more to help Americans upgrade their skills...And in a 21st-century economy that rewards knowledge like never before, we need to keep up our game. We need to do more.

The de Blasio administration has also brought a renewed focus on issues of inequality, poverty, and economic mobility to many realms of New York City government. Indeed, his administration's Career Pathways report emphasized the importance of skills training and education investments to prepare city residents for good-paying jobs in high-demand industries. Among the report's six major recommendations, three had particular relevance for Scale:

- develop industry partnerships in six sectors, including health care, technology, manufacturing, construction, food service, and retail
- establish career pathways as the framework for the city's workforce system
- triple the city's training investment to \$100 million annually by 2020 in career-track, middle-skill occupations¹⁹

Following the release of the Career Pathways report, the city established the New York City Tech Talent Pipeline, a \$10 million industry partnership intended to "deliver technology education, training and job opportunities to New Yorkers across the five boroughs."²⁰

With feedback from the Tech Talent Pipeline advisory board, the city issued a request for proposals for training in three technology occupations: data analysis, quality assurance testing, and IT engineering/support.²¹

None of these occupations, however, were well suited for Project Scale, and as of this writing, Per Scholas was still seeking public funding to sustain the program. In the meantime, it plans to continue offering CCNA training using support from private foundations.

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