STEPPING STONE TO REAL CAREERS: P-TECH INTERNSHIPS

Providing students with opportunities to practice and push the envelope on their skills in a real-world setting is key to career-readiness. According to a 2012 report by U.S. News & World Report, employers who are looking to hire want people who can demonstrate that they can do the job. For a young person, internships serve as tangible evidence of the academic, technical and workplace skills that they have mastered. The P-TECH Brooklyn school works hard to ensure that their students are given these valuable opportunities.

**School:** Pathways in Technology Early College High School (P-TECH)

**Partners:** New York City Department of Education, The City University of New York, New York City College of Technology and IBM Corporation

**Launch:** September 2011, the first P-TECH 9-14 Model School

**AAS Degrees:** Computer Information Systems and Electromechanical Engineering Technology

In July 2013, 61 of 102 students in Year Three became the first students from P-TECH Brooklyn – and the first from the P-TECH 9-14 model – to participate in internships. Students were eligible based upon two factors:

1. Enrollment in college classes at the New York City College of Technology
2. Participation in workplace learning courses, including Virtual Enterprise

While many teenagers get some type of work experience during high school, the internship program at P-TECH Brooklyn is focused, skills-based, and aligned to the highly competitive jobs that students will be eligible for upon graduation. These paid positions are also tailored to each student’s technical expertise. Some students had as many as 38 college credits, but some students had only taken one or two college classes.

Identifying an internship for each of the 61 eligible students was a significant task for the P-TECH Brooklyn Workplace Learning team. Recruitment began with the P-TECH Brooklyn Advisory Board and the school partners. The process took almost nine months, with frequent meetings and phone calls to identify and develop positions that students could successfully fill. Ultimately, IBM, the lead Employer Partner, provided 41 internships. The remaining 20 came from the Brooklyn Navy Yard, CUNY, City Tech, Grand Central Tech and a city law firm.

Preparing students for the internships was another critical task. Students participated in “dress for success” workshops and mock interviews. They also prepared online portfolios that described their academic coursework and highlighted special projects, such as website development, that they had completed on their own or through hackathons or other afterschool events.

P-TECH teachers and advisory board members reviewed every student’s online portfolio and recommended students for employers to interview, based on technical skill-set, perceived maturity level, academic and extracurricular activities, and organizational fit. Employers selected additional students to interview after reviewing their online portfolios as well. After the interviews, the teachers and the school’s Advisory Board matched each student based on the employers’ first choice.

Interns contributed to real and meaningful projects that fit their skill set. While the work assignments were not all technical in nature, they exposed students to various aspects of the work in the technology field. Some interns worked directly at client sites, on individual tasks, or in teams. The IBM Research Group, for
example, hired eight interns to work in two small teams to do an in-depth analysis on how IBM technology could be applied to different industries like mobile banking, security and defense, and healthcare. They also were tasked with creating their own website to showcase their research and recommendations.

Another team of IBM interns worked with the Global Technology Services team responsible for cloud services. The interns learned, designed, and implemented an open source services management system, which was used in support of the United States Tennis Association’s U.S. Open Tournament. At the end of their internship, they all attended the U.S. Open to see the work they had contributed to in action.

In addition to a work-site supervisor, many of the interns also had a mentor to check in on them regularly and get them acclimated to the workplace. Students worked approximately 32 hours per week for six to eight weeks depending on their project. On Fridays, they were back at P-TECH Brooklyn, attending seminars on the workplace and sharing their experiences.

Students received mid-term and final evaluations from their supervisors, and also were asked to reflect on their work experiences. Some examples of student reflections and supervisor evaluations follow.

EXAMPLE STUDENT REFLECTIONS

Cletus (Internship with IBM Research Team)
At the start of the internship, I had basic knowledge about web development and design. I helped design a website for one of my classes, but this internship has helped me build on web development and design skills. I am currently working on building a website from scratch with some peers. My manager has given me a lot of tips and lessons on how to build the most effective website I can.

Nicholas (Internship with IBM Global Technical Services)
To my surprise, I landed an interview with IBM’s cloud service group. My co-workers told me I would be using an operating system called Linux. Linux was very new to me, so I was lost when they said it would be the base for our project. After reading up on documentation and getting hands-on experience, I soon picked up a huge interest in this new operating system and plan to install it on my personal computer.

Nkosi (Internship with Grand Central Tech)
This summer I was given the opportunity to work at a startup company called Modalyst. They are part of a bigger project at Grand Central Tech. This company has created a marketplace for upcoming designers to display and sell their products to well-known retailers. I love the job that I have been assigned. I create certain features for the Modalyst website using various programming languages. The environment is very comfortable and supportive, and management always has the time to explain and clarify what is needed from me.

Kristoffer (Internship with Brooklyn Navy Yard)
My internship at the Brooklyn Navy Yard has been great. I have new tasks everyday, and I am meeting a lot of new people. I am also learning a lot about the company itself, and what is being done in the field. I am given tasks like overlooking blueprints and data, and producing excel spreadsheets with lists of names, addresses, and phone numbers given to me. Other than the work itself, I feel that the internship has made me more responsible and more aware of the work environment itself. I am challenged with tracking my own responsibilities and doing my own work. It has taught me time management as well because I have to come in on time everyday and be back on time from lunch.
Spencer (Internship with IBM Global Technical Services)
This internship made me want to strive more for the career I am looking for. At my internship, I am a part of an SSR (System Service Representative) team. An SSR team goes on service calls for different accounts to replace IBM-issued equipment that is under warranty. Some service calls are as simple as replacing a hard drive. Others are as complicated as assembling an iSeries System. My experience has made me want to be an engineer more than ever. I’m not sure if I want to be that guy who goes around replacing equipment, but I do want to be that person who creates the equipment, and maybe even invents new equipment.

SUPERVISOR EVALUATIONS

Frank (Internship with IBM)
Frank is a pleasure. He is extremely motivated, driven, and asks the right questions. He goes above and beyond expectations, always offering to lend a hand and curious to know about the additional work our team does. We are constantly looking to give him more responsibility as he is proving to be a valuable asset to any team!

Jonathan (Internship with The City University of New York)
I was impressed by Jonathan’s professionalism and work ethic. He changed my opinion of teenagers and reminded me that I was once a teenager too. He has a great ability to think quickly on his feet and understood the big picture. I offered him feedback to work on communication skills (either focus on writing or speaking) because that could get in the way of future opportunities. Overall, this is a great program and it really allows the students to understand the day-to-day operations of a program, organization, department and role. I hope they got as much out of it as we did.

Gabriel (Internship with IBM)
Gabriel is one of the brightest high school students I’ve ever met. He will accomplish great things if he continues being driven and motivated. He is a natural leader and as a next step should learn how to collaborate with and motivate his peers to accomplish team goals as a unit. It’s been a pleasure to work with Gabriel and I have no doubt he will go far in his career.

Gulshan (Internship with IBM)
Gulshan is a very professional, responsible and hard working young man. He tackles tasks with great enthusiasm and able to work independently to complete the work at hand. He knows to ask questions when needed and seek help when required. We are very pleased to have Gulshan as part of our team.

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For more information about Focus on College in the P-TECH 9-14 model, please visit ptech.org