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The Switch

Why students are throwing tons of money at a program that won't give them a college degree

By Karen Turner March 17

Brian O'Neill has been trying to hire a developer at Philly-based tech company Monetate. He's used to seeing resumes from "bootcampers," or graduates of computer coding "bootcamp" programs. He's also used to turning them down for such an advanced job.

Typically, he gives them a technical test during the interview. "They get through the easy programming exercises," he says, "And they can't complete the rest." About halfway through, they drop off. They can't seem to pass. If he hires them at all, it'll usually be for low-level positions.

O'Neill is witnessing one of the biggest booms in the job market right now: an influx of coders graduating from three- to six-month coding crunch programs in lieu of traditional four-year Computer Science degree programs. These for-profit programs, non-accredited and operating without much regulation, have been cropping up in response to a swelling market demand for STEM workers. They vary in quality, but most bootcamps promise steady, high-paying work upon graduation, prompting aspiring coders to invest anywhere from $10,000 to $20,000 of personal money to enroll. (Far less expensive, of course, than a full-fledged college program, where the out-of-state cost can average $38,239 a year, or $152,956 for four years.)

Now, colleges and universities are teaming up with these private schools, or rolling out their own bootcamp-style programs to offer accelerated coding workshops to their students. Northeastern, UPenn, and Rutgers have announced in-house bootcamps in the couple of months, while Lynn University and Concordia University have paired with programs like General Assembly and The Software Craftsmanship Guild. It's a response to the tremendous growth in bootcamp enrollment, which increased by 138 percent from 2014 to 2015, compared to more modest growth in traditional Computer Science degrees (14 percent from 2013 to 2014). The demand is clear. But should universities be borrowing bootcamp tactics?

Longtime tech recruiter Dave Fecak is worried about the push towards fast-paced, truncated coding programs. "We as a nation, as we talk about the STEM shortage, we're fostering a gold rush mentality that leads to these bootcamps with the promise of employment, promise of strong employment with strong demand and stability and a lot of money," he said. "And a lot of the people that may get coerced into signing up for these bootcamps may end up with a lot of debt and not a lot of job offers." He likens the trend to throwing bodies at the problem rather than addressing the industry's real need for highly skilled developers.

O'Neill, who is Principal Architect at Monetate, agrees. He's skeptical of bootcamper applicants and is more inclined to hire four-year CS degree graduates, especially for the most in-demand positions: "full stack" developers who possess a range of coding skills. He compares the skillsets of bootcampers to performing auto repair on a car, versus the kind of large-scale, architectural skills of your standard CS degree holder, who can do everything from small repairs to making deep structural changes. "You emerge from a bootcamp fit to do an oil change, but not design a car," he said.

A typical four-year CS degree, will require students to study theoretical principles of programming on top of straight coding skills. Bootcamps, on the other hand, focus on programming alone, with an emphasis on in-demand languages in popular sectors like app development, functioning more like vocational school.

The universities adopting the bootcamp model are incorporating them in different ways. Lynn University, who paired with General Assembly, provides a "study abroad" style program, offering students a semester's worth of credits for attending the 16-week bootcamp. Horizons, the bootcamp that has paired with UPenn, offers either summer or semester courses for college credit. Both come at a steep price, around $14,000 per semester for tuition alone. This is on top of the cost of a four-year college degree.

But Anupam Joshi sees the immediate benefits of these programs. He's Chair of Computer Science and Electrical Engineering at the University of Maryland, Baltimore County, which doesn't currently have plans to incorporate bootcamp style programs into its CS department (though the university does have a "training center" that offers vocational services, including coding). But he appreciates the bootcamps' quick adaptability to industry fads and the wider scope of needs they fill amidst the student body. "Bootcamps are good for someone who wants to get an entry level job," he said of the promotion of coding over theory. "It's like every other trade."

Most bootcamps use this as their selling point, saying the tuition is a small price considering the ample opportunity for high-paying jobs upon completion of the program. The programs are also more skills-focused, especially for students who might find the regular CS degrees overly theoretical. Many boast extremely high hire rates upwards of 90 percent and salaries from $70,000 to $100,000. The data on the accuracy of these claims is hazy, especially as coding bootcamps proliferate with increasing demand. There are reports that coding bootcamps hire their own alums as teaching assistants and eventually teachers to keep their hire rates looking good. That's one advantage of these bootcamps affiliating themselves with different universities -- they're getting paired with a trustworthy name and, hopefully for incoming students, they'll be held to stricter standards.

Joshi is less concerned with bootcampers finding that initial job -- he says demand is high enough that they probably will -- than where those bootcampers will wind up in a few years. "How far can these people go in their careers, or will they have problems when two, three years from now, the specific set of tools and technology they learned at bootcamp will change? They don't have the fundamentals to pick up a new set of tools and technologies. Will they be

bootcamping every 3 years? That's an open question right now."

Tech recruiter Fecak echos this sentiment. "I think there is a possibility that the market will get flooded with applicants who have a false expectation of their qualifications," he said. "You can have thousands of thousands of people graduating these programs with the thought that they're going to be able to pass these advanced technical interviews, and they might not be able to. What is that gonna do? It's gonna create a deeper stigma around the bootcamps that will make it difficult even for the qualified people to graduate."

O'Neill of Monetate also added that the bootcampers are at risk of their marketable skills becoming increasingly cheapened. "The same skillset that a lot of people are picking up out of bootcamps are the same skillset that can easily be outsourced or offshored," he said. "The people who are gonna be developing intellectual property, platforms itself, the ones you want to be at the core to your company. The kind of skillsets that are developing on the peripheral are the sort of stuff you can easily outsource or you're at least looking for the cheapest labor you can to accomplish that task." He's worried that bootcampers are being sold a vision where they are filling the need for highly skilled developers that is just not true.

He brings the oil changer versus car designer metaphor one more time. "Unfortunately, many companies are also trying to outsource and/or offshore their oil changes. And regardless, the industry will always need people capable of designing cars, or better yet figuring out the next mode of transportation."