Computer Skills
No Longer Optional

As digital technology becomes enmeshed in all industries, nearly every career path requires computer literacy. *But are students prepared?*

It's easy to think of the Millennial generation, those born roughly between 1982 and 2002, as tech-savvy digital natives — and in many ways they are. Immersed in consumer technology since birth, today's youth has mastered the art of the swipe, the selfie and social media. So it may come as a surprise that Millennials often lack essential digital skills needed to succeed in the workplace — be it a conventional office setting, an auto mechanic's shop, or in a tractor on a farm.

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Technology: Ubiquitous in Every Industry

Digital technology has extended its reach into every field imaginable — and it isn't limited to white collar careers. Ninety-six percent of working Americans use new communications technologies as part of their daily life, while 62 percent use the internet as an integral part of their jobs.[1] Nearly all industries today require at least some on-the-job interaction with a digital device, including sectors the general public often doesn't consider technology dependent.

For example, in modern agriculture, monitoring and evaluation increasingly require smartphones and tablets.[2] The driverless tractor, which has gone from concept to reality in just a few years, uses geospatial positioning systems (GPS) and other wireless technologies to farm land without the need for a human operator behind the wheel.

In the medical field, staff nurses order medications and supplies, look up drug interactions and research medical conditions on computers. They also use smartphones and tablets to communicate with physicians about patients in their care.[3] In the automotive industry, a modern car has an average of 60 to 100 sensors on board.[4] Within a few years, this number is expected to rise to 200 as cars

get "smarter" and have more autonomous capabilities. Today's auto mechanics need more than a wrench to diagnose and repair car and truck problems. They must know how to use a laptop to connect to and operate automotive diagnostic machines.

"You see technology so frequently that you don't even think of it as technology," says Dr. Kecia Ray, executive director of the Center for Digital Education (CDE). "Like a gas station pump. The way you check out at a supermarket. The way you go into a store and the door opens automatically because there's a sensor above it. The way there are cameras on interstates, so you can see traffic flow."

Dan Ramirez is the director of strategic marketing and development for the National Coalition of Certification Centers (NC3), a network of education providers and companies that advance and validate emerging technology skills in the transportation, aviation and energy fields. He has seen firsthand how computer technology permeates almost all job fields.

"I was at a school for an advisory meeting and a gentleman walked into the back [of the room] with a laptop," Ramirez recalls. "I thought we were having Wi-Fi or network connectivity issues, but this young man was the HVAC guy. He was diagnosing the HVAC and resetting the parameters, and I thought he was the IT guy. That's what a modern commercial HVAC technician looks like."

The "Digital Native" Myth

Even when it comes to traditional office jobs, schools often aren't teaching computer literacy skills that employers require, such as how to create a worksheet in Microsoft Excel, write a formal business email, or troubleshoot a malfunctioning printer that won't print.

"Schools don't typically teach Excel or Word anymore, or basic computer [skills] classes," says Ray. "They're supposed to be incorporated into the subject area, but many teachers don't know how to use those software tools to the extent they need to, in order to teach them."

"Most colleges and universities have their syllabi online, and students must use an online portal to access their syllabi and submit assignments," she continues. "I hear horror stories about kids who fail because they didn't know they were supposed [to use online tools], and

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nobody told them. Everybody thinks they come in with that skill set, but they don't."

That's a serious issue in a world where job-seeking has largely moved online. Approximately one-third of Americans looked for a new job in the past two years, and 79 percent of them used online resources in their most recent employment search.[5]

Young people do not pick up computer skills intuitively. The concept of the "digital native" — Millennials instinctively understanding digital technology — is a fallacy that risks leaving recent graduates ill-equipped for the workplace. In addition, it leaves businesses without the skilled employees they need.[6] According to Change the Equation — a nonprofit coalition of Fortune 500 CEOs that promotes PK-12 STEM learning — students spend about 35 hours per week on digital media, but nearly 6 in 10 Millennials can't do basic tasks such as sorting, searching for or emailing data from a spreadsheet.[7]

 "We took the myth of the digital native for granted, but then realized the working competency generally isn't there," says Ramirez. "It's a huge challenge for employers."

Business software usage — spreadsheets, word processing and programs for medical billing — has a significant market impact. Without the ability to use these programs, a job seeker will likely be unsuccessful.

"We feel that nothing has changed more in the Great Recession than the fact that employers want employees who can show up on day one and step right into the job. And a big part of that is computer literacy," says Ramirez.

This digital literacy problem isn't limited to the United States — it's global in scope. A recent survey in Germany showed that only 20 percent of student respondents could successfully apply a paragraph style in a Microsoft Word document. A separate study in Italy found that 42 percent of young people there were unaware of the security risks inherent in wireless internet usage. And in Australia, research shows that 45 percent of young respondents had a "rudimentary" understanding of digital technologies.[8]

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 "In Italy, the situation is quite the same, as digital skills are on average very low," says Roberto Mosca, a business development manager for TESI Automazione Srl, an Italian IT certification and testing provider. "A major reason for this is that teachers often aren't well-versed in computer technology, and therefore can't pass along digital know-how to their students," he says.

IT Certification Fills a Critical Need

Certification testing plays a crucial role in helping students acquire the technical skills required in the 21st-century workplace. It certifies a person as being competent in a job or task, usually by completing a program of study and then passing an examination.

NC3 develops and implements certifications built on national skill standards. One of its partners is Certiport, a global leader in performance-based certification

exams and practice tests for academic institutions and businesses. Certiport's IC3 Digital Literacy Certification is a global benchmark for basic computer literacy, teaching students how to use operating systems, hardware, software and networks.

The IC3 Digital Literacy Certification benefits both students and teachers in all areas of study. For students, it not only enables a shorter learning curve in mastering basic computer and internet skills, but also provides a globally recognized credential that is accessible via fraud-proof online digital transcripts and badges.

"It makes for a golden student," says Ramirez. "Employers today tend to scan resumes for specialized skills, such as proficiency in a software program critical to their business, or the ability to use a particular digital device or tool. A digital certification can help young job applicants stand out in a competitive field as well," he adds.

"The thing that employers look for most — I know I certainly do — is a portfolio of very specific skills," says Ramirez. For instructors, IC3 provides a ready solution, one more efficient and cost effective than assembling an assessment to meet national or local educational requirements. It also serves as a professional development tool that boosts instructor confidence to integrate the latest technology into the classroom.

Programs such as Certiport's IC3 Digital Literacy Certification help fill the void in computer education. They teach basic digital literacy concepts that students will need to get — and keep — a job after graduation.

Succeeding in the Modern Workplace

Basic digital literacy skills are requisite in virtually every industry everywhere you go, but students often enter the workforce without them. This is why performance-based digital literacy certifications — such as Certiport's IC3 Digital Literacy Certification — are critical for both employers and students.

"A certificate provides an excellent opportunity for kids to reach a goal," says Ray. "There's a lot of discipline in obtaining a certificate, and a lot of structure in certificate programs. These elements help students become successful at whatever they pursue beyond high school."

Rather than take a deep dive into arcane technical details, IC3 teaches pragmatic, real-world computer skills. Its three main exams focus on key applications, such as how to use popular office programs including a word processor and a spreadsheet. IC3 also teaches computer fundamentals, such as how to connect and troubleshoot a printer. And, it educates students about online etiquette: how to interact professionally and safely online, and how to effectively use search and other internet tools.

"It's a huge benefit for students to get that competency under their belts," says Ramirez. "It's absolutely vital for success in the modern workplace."

Endnotes

1. http://2010-2014.commerce.gov/news/fact-sheets/2011/05/13/fact-sheet-digital-literacy.html
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