

To Stay Relevant in a Career, Workers Train Nonstop

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Over the last decade, Ty Hallock has steered his business from Web site creation to social media to mobile apps. In three more years, he expects to be back at the drawing board again.

To prepare, Mr. Hallock, 29, spends an hour or two a day at his business, TopFloorStudio in Asheville, N.C., tracking venture capitalists and start-up news, trying to divine the next frontier. He created TopFloorUniversity, where experts teach his employees and clients the latest in app development. When he could not find a good curriculum for information architecture, he and a colleague developed one themselves. As a pretext to learn from the luminaries in his field, Mr. Hallock even produces his own podcast.

“You’re always reaching for something that’s kind of like unknown, because you don’t know what is really going to be the future,” Mr. Hallock said. “I’m not in my 30s yet, and I’m sure at some point I’m going to be like, ‘Enough.’ ”

But exhaustion may be a luxury that Mr. Hallock can never afford. The need to constantly adapt is the new reality for many workers, well beyond the information technology business. Car mechanics, librarians, doctors, Hollywood special effects designers — virtually everyone whose job is touched by computing — are being forced to find new, more efficient ways to learn as retooling becomes increasingly important not just to change careers, but simply to stay competitive on their chosen path.

Going back to school for months or years is not realistic for many workers, who are often left to figure out for themselves what new skills will make them more valuable, or just keep them from obsolescence. In their quest to occupy a useful niche, they are turning to bite-size instructional videos, peer-to-peer forums and virtual college courses.

Lynda Gratton, a professor of management practice at the London Business School, has coined a term for this necessity: “serial mastery.”

“You can’t expect that what you’ve become a master in will keep you valuable throughout the whole of your career, and you want to add to that the fact that most people are now going to be working into their 70s,” she said, adding that workers must try to choose specialties that cannot be outsourced or automated. “Being a generalist is, in my view, very unwise. Your major competitor is Wikipedia or Google.”

Businesses have responded by pouring more money into training, even in the current economic doldrums, according to several measures. They have experimented by paying employees to share their expertise in internal social networks, creating video games that teach and, human resources consultants say, enticing employees with tuition help even if they leave the company.

Individuals have also shouldered a lot of responsibility for their own upgrades. Lynda.com, which charges \$25 a month for access to training videos on topics like the latest version of Photoshop, says its base of individual customers has been growing 42 percent a year since 2008. Online universities like Udacity and Coursera are on pace to double in size in a year, according to Josh Bersin of Bersin & Associates, a consulting firm that specializes in learning and talent management. The number of doctors participating in continuing education programs has more than doubled in the last decade, with the vast majority of the growth stemming from the increased popularity of Internet-based activities, according to the Accreditation Council for Continuing Medical Education in Chicago.

The struggle is not just to keep up, but to anticipate a future of rapid change. When the Asheville-Buncombe Technical Community College in North Carolina wanted to start a program for developing smartphone and tablet apps, the faculty had to consider the name carefully. “We had this title Mobile Applications, and then we realized that it may not be apps in two years, it may be something else,” said Pamela Silvers, the chairwoman of the business computer technologies department. “So we changed it to Mobile Development.”

As the metadata and digital archivist at Emory University, Elizabeth Russey Roke, 35, has had to keep up with evolving standards that help different databases share information, learn how to archive “born digital” materials, and use computers to bring literary and social connections among different collections to life. The bulk of her learning has been on the job, supplemented by the occasional course or videos on Lynda.com.

“For me, it’s easier to learn something in the classroom than it is on my own,” she said. “But I can’t exactly afford another three years of library school.”

Rapid change is a challenge for traditional universities; textbooks and even journals often lag too far behind the curve to be of help, said Kunal Mehta, a Ph.D. student in bioengineering at Stanford University. His field is so new, and changing so rapidly, he said, that there is little consensus on established practices or necessary skills. “It’s more difficult to know what we should learn,” he said. “We have advisers that we work with, but a lot of times they don’t know any better than us what’s going to happen in the future.”

Instead, Mr. Mehta, 26, spends a lot of time comparing notes with others in his field, just as many professionals turn to their peers to help them stay current. The International Automotive Technicians Network, where mechanics pay \$15 a month to trade tips on repairs, has more than 75,000 active users today, up from 48,000 in 2006, said Scott Brown, the president.

In an economy where new, specialized knowledge is worth so much, it may seem anticompetitive to share expertise. But many professionals say they don't see it that way.

"We're scattered all over the country, Australia, New Zealand, the U.K., so it never really bothered us that we were sharing the secrets of what we do," said Bill Moss, whose repair shop in Warrenton, Va., specializes in European cars, and who is a frequent user of peer-to-peer forums.

Mr. Moss, 55, said technological advances and proprietary diagnostic tools had forced many garages to specialize. Ten years ago, if his business had hit a slow patch, he said, he would have been quicker to broaden his repertory. "I might have looked at other brands and said, 'These cars aren't so bad.' That's much harder to do now, based on technology and equipment requirements." His training budget is about \$4,000 a year for each repair technician.

Learning curves are not always driven by technology. Managers have to deal with different cultures, different time zones and different generations as well as changing attitudes. As medical director of the Reproductive Science Center of New England, Dr. Samuel C. Pang has used patient focus groups and sensitivity training to help the staff adjust to treating lesbian couples, gay male couples, and transgendered couples who want to have children. This has given the clinic a competitive advantage.

"We have had several male couples and lesbian couples come to our program from our competitors' program because they said they didn't feel comfortable there," Dr. Pang said.

On top of that, he has to master constantly evolving technology. "The amount of information that I learned in medical school is minuscule," he said, "compared to what is out there now."

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