

## LEARNING AND EARNING IN THE INFORMATION AGE

How can technology empower workers to find their way in the changing jobs landscape?

Welcome to the new frontier of work. Digital literacy is the lingua franca. Everyone, in every division and department, is up to speed on the latest software and devices. Remote workers and digital nomads come together in virtual teams to tackle projects. Then they disband and regroup, reconfiguring and taking on new roles.

Change is often fast and furious. Computers and robots handle the repetitive, routine tasks. Employees are there to tackle the complex, unpredictable stuff. Workers must be entrepreneurial problem solvers, ready to blaze new trails in the face of complexity and uncertainty.

This may sound like the culture at a Silicon Valley start-up, but the landscape of work is moving in this direction for every type of job, in every corner of the country. Over the coming decade, employers of all types will be looking for workers who are innovative thinkers and tech-savvy communicators.

Of course there will be a steady need for people with the training and experience to keep computerized industries humming—network specialists, programmers, software designers, and database gurus. And thanks to the rise of the Internet, demand is also growing for web-based careers that a decade ago weren't on anyone's radar, including SEO specialists and usability experts.

Beyond the growing demand for technology workers, nearly every type of job is transforming as technology advances. Most employees use technology on a daily basis and are expected to constantly adapt to new technological developments. This is true even for jobs that have been historically hands-on and low-tech. Just think about American factories, where traditional work is being replaced by advanced manufacturing, requiring workers to interface with sophisticated computerized equipment. Technology is transforming the workplace, and it has the same power to transform education. However, despite some exciting localized efforts to tap into the pedagogical power of technology, there is still a deep divide between what most of today's students are learning and the intellectual skills and strategies they will need to succeed in the 21st-century workplace.

As increased connectivity allows workers to interact and share information from multiple locations, they must be adept at creating a virtual presence. This capacity for virtual collaboration is just one of 10 essential skills that workers will need by 2020, according to a report conducted by the Institute for the Future (ITF) for the Apollo Research Institute. Not surprisingly, five of these 10 skills revolve around technology.

Not only is technology driving the need for a different

approach to education—one that cultivates skills such as virtual collaboration—but it also offers exciting opportunities for new modes of learning. Technology facilitates personalization, allowing students to learn at their own pace, rather than in lockstep with classmates or colleagues. It also creates increased opportunities for learning outside the classroom, making it possible for more people in more places to be engaged, lifelong learners.

Despite all this, education in the United States has largely lagged behind the workplace when it comes to embracing technology. According to Satish Menon, Chief Technology Officer for the Apollo Group, "Technology and the information age have only touched education, mostly in a superficial way so far."

The educational landscape is starting to expand and evolve in many promising directions, as was on view at The Atlantic's Technologies in Education Forum on May 22. "Now it appears that the time is ripe for technology to aid in the transformation of education toward a more efficient, cost-effective, and fluid model," Menon said. "Ultimately

this will lead to better lifelong learning experiences that are a necessity for our workforce to stay relevant."

So how can we bridge the technology gap between the classroom (real or virtual) and the workplace? To start with, we need to translate the engagement that students experience with familiar, widespread technology into a deeper engagement with learning. This is true for every season and phase of education.

Educators and policymakers also need to invest in developing and replicating models and methods that work. Digital literacy shouldn't be an afterthought, or an extracurricular activity, or a matter of luck. We can't allow education to stay stuck in outdated modes that don't sync up with workforce needs.

Now is the time to identify and support effective technologies for lifelong education, empowering workers to keep up—and to stay relevant—as they navigate a rapidly evolving job landscape. After all, tomorrow's workers will shape our nation's future. ■



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