Learning from a Crisis: Human + Machine

AI is a change pressure we should not ignore. In the aftermath of COVID-19, we can expect an acceleration of AI and automation as companies seek ways to continue operating while protecting public health. The first three New Horizons columns in 2020—published in February, May, and August—set out to explore the ways in which artificial intelligence (AI) will challenge the traditional model of higher education and how the sector should respond. These challenges lie in how we will learn and work in the future. Our response depends on our shared sense of urgency, our willingness to lead, and our ability to experiment.

In the first column, George Siemens describes a “post-learning” era in which learning is evolving into a cognitive partnership between humans and the AI technologies that outperform us in traditional educational tasks. AI, he argues, will push educators to respond by exploring and designing the range of learning activities that are likely to remain human.1 In her column Allison Salisbury reminds us that AI is also fundamentally changing the nature of work and the types of jobs that will be needed. Colleges and universities should respond to that change by creating experiences that go beyond domain knowledge to develop occupational identity, social capital, and skills.2 In the future, graduates’ agility may matter more than their degree.

AI is a change pressure we should not ignore. In the aftermath of COVID-19, we can expect an acceleration of AI and automation as companies seek ways to continue operating while protecting public health.3 Those jobs—many of them frontline jobs—are unlikely to return. Americans in these jobs will need the agility to change direction. They will seek that agility through education. This, as Brian Fleming wrote in the second New Horizons column this year, is where we can find some good news for higher education. Americans have more trust in higher education institutions than in companies to take the lead in building, managing, and governing the ethical uses of AI in everyday life.4 They also look to colleges and universities to help them achieve the economic mobility they desire. In order to lead change, we in higher education need to engage in the change.

We are ready for this. A lot has happened since January 2020. Almost overnight, the COVID-19 pandemic became an immediate threat to traditional higher education models, and our resilience has been tested. The response wasn’t perfect, but institutions addressed the urgency by altering existing models in real time and by continuing to improve on new models to deliver on their missions. At my institution, Davidson College, instructional designers, librarians, and IT professionals quickly scaled online infrastructure and faculty professional development. Our faculty embraced an improvement and committed themselves to preparing for an online and hybrid education in the fall term. Our staff reimagined every aspect of student services for a digital campus in the event we would continue on a remote basis. We led from care and saw firsthand how we can change quickly when all of the oars are moving in the same direction.

Leading from care should not stop at the current crisis. Caring also means looking more deeply at what lessons we will take away from this crisis and what learners need most from higher education going forward. Campus presidents generally agree that most institutions are unlikely to return completely to the pre-COVID models.5 The cost of higher education—already out of reach for many—has been made worse by a deepening economic crisis. The perceived value of online learning does not match the cost of a residential tuition. And more students will look more closely at less-expensive alternatives, especially if companies develop their own training and remove the requirement of a college degree.

Online learning was demonized at most traditional institutions in the spring. “Zoom U” was practically a slur. But the longer this goes on, the more likely it is that institutional leaders will acknowledge that some of the affordances of online learning and a pared-down campus are worth keeping. Do we actually need all of the committee work we had in place before? If learning is happening and if we can maintain an intellectual community from afar, how might we leverage online processes to do...
things we previously thought impossible to accom-
plish except in face-to-face situations? Are students
learning as much in less time? If so, how might we
lower the cost to a degree?

Where Do We Start?
To understand how we might respond to AI, we
can start by answering “questions about how to
balance human and artificial cognition and about
which domains of human cognition can (and
cannot) be duplicated by technology.”6 Related
to this, we can design more intentionally for the
uniquely valuable aspects of a college education.

According to a Gallup-Purdue study, a life-alter-
ing college/university education includes six key
experiences categorized as “relationship-rich” and
“work-integrated”:

■ “I had at least one professor who made me
excited about learning.”
■ “My professors cared about me as a person.”
■ “I had a mentor who encouraged me to pursue
my goals and dreams.”
■ “I worked on a project that took a semester or
more to complete.”
■ “I had an internship or job that allowed me to
apply what I was learning in the classroom.”
■ “I was extremely active in extracurricular activ-
ities and organizations.”

Unfortunately, only 3 percent of all college/univer-
sity graduates report having had these experiences.
However, as Carol Quillen, president of Davidson
College, has written: “Let’s not confuse this fall-
ing short with the foundational importance of the
mission.”8 What learners need is a greater concen-
tration on the uniquely human habits of mind and
the educational experiences that foster them. Now
is a good time to focus on a collective response to
the accelerating changes of AI and on what we have
learned from the COVID-19 crisis.

Notes
1. George Siemens, “The Post-Learning Era in Higher Education:
   Human + Machine,” New Horizons (column), EDUCAUSE Review
   55, no. 1 (2020).
   Machine,” New Horizons (column), EDUCAUSE Review 55, no. 3
   (2020).
3. Alana Semuels, “Millions of Americans Have Lost Jobs in the
   Pandemic—and Robots and AI Are Replacing Them Faster
   New Horizons (column), EDUCAUSE Review 55, no. 2 (2020).
8. Carol Quillen, “Covid-19 Threatens Higher Ed—and Also Offers

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