Digital Transformation
It’s Time

By Diana G. Oblinger
Digital transformation (Dx) may sound like a distraction in today’s environment, but it may also be essential. Of the many challenges already facing higher education, three have become unavoidable since the onset of COVID-19.

First, financial pressures are coming from all sides: reduced state support; uncertain enrollments; refunds to students; donation and endowment declines. For example:

- The University of Michigan anticipates losses ranging from $400 million to $1 billion through the end of the calendar year. The Pennsylvania State System of Higher Education “forecasts a $52 million loss, even after federal stimulus money is applied.”

- The American Council on Education (ACE) estimates an enrollment drop of 15 percent, including a 25 percent decline in international students. In an April 2020 survey of college and university presidents, 86 percent cited fall or summer enrollment as their most pressing issue (followed by long-term financial viability).

- Students’ financial difficulties will affect enrollment. In a recent poll, 52 percent of students report that a parent has lost a job, been laid off, or furloughed, and 17 percent are “near the point of giving up on attending a 4-year institution full-time in the fall.”

- Nearly half (43 percent) of college and university advancement professionals did not expect to meet their institution’s fund-raising goals this fiscal year.

Higher education institutions typically cope with financial pressures by bringing in additional revenue or cutting costs. Cutting costs has never been popular in higher education, of course, but there may be no way to avoid it now—both for financial and for equity reasons. As the Harvard scholar (now president) Lawrence S. Bacow said in 2017: “If we fail to cut the growth in college costs, we will not only price many students and their families out of the market but I think we also risk all of public support for higher education, and lacking that support we will never make progress on access.”

A second unavoidable challenge is the change in the college experience. Due to COVID-19, faculty, staff, students, and administrators are spending more time online and off-site. Students and parents are concerned about the uneven quality of remote teaching. Interactions go beyond the classroom, of course, ranging from advising to career services to mental health. The loss of face-to-face contact is felt strongly by all. As students return to campus, safety and security will remain major concerns. However, social distancing, testing, and contact tracing will likely alter the college experience even further.

Whether on- or off-campus, reaching faculty, students, and staff where they are is difficult. They may be physically distant. They may be busy or distracted. The essence of “college” is connections—the personal relationships among faculty, staff, and students. The way we build knowledge is through making these connections, as well as “connecting the dots” and collaborating. Colleges and universities are driven by connections—among people, disciplines, and communities. Limited proximity challenges those connections and, therefore, the traditional college experience.

The third challenge since COVID-19 is ongoing uncertainty. The standard rhythm of higher education has been interrupted by the pandemic, resulting in the need for more flexibility than ever before. While most institutions have relatively fixed schedules from year
to year, the standard schedule is unlikely to work for the fall 2020 term. Many institutions are creating leaner schedules and fewer course options to cope with cost and safety concerns. Some will resume classes only online. Others will start classes earlier and end the term before Thanksgiving. Internships are limited or have gone virtual. Some institutions might close completely; others might merge. In addition, students’ education plans have changed. Some plan to stop-out; others are more likely to attend online-only or seek credentials. Instead of thinking of institutions as having fixed inputs, outputs, timelines, and traditions, today’s higher education leaders must be flexible.

*Digital transformation can help higher education meet all three challenges.* As used in this article, *digital transformation* is not defined by the technology alone but, instead, places more emphasis on the impact of technology on education. Digital transformation can range from the simple to the systemic. It can manifest with cutting-edge technologies and radically new models. Or the transformation may be less dramatic, even low-tech, while still yielding transformative outcomes.

The key to digital transformation may be strategic thinking. The following questions illustrate how digital transformation might help higher education meet the three unavoidable challenges ahead:

- Because of mounting financial pressures, we should ask, “What can we stop doing?”
- Because of the change in the college experience, we should ask, “How can we reach people where they are?”
- Because of the ongoing uncertainty in higher education, we should ask, “What would make us more resilient?”

It’s time to use digital transformation—a model in which the digital meets the physical—to address higher education’s challenges and create new opportunities.

**What Can We Stop Doing?**

Smart machines today allow us to change the way we work, complementing human efforts and giving us time to do other things. There may be no better time to ask, “What can we stop doing?” As Harvard Business School Professor Michael Porter has said, “The essence of strategy is choosing what not to do.”

**Saving Time**

At Flinders University in Australia, high-achieving students are sent award letters, three times a year. Doing so is a lot of work. Twenty-four thousand students must be evaluated to determine their eligibility—a task involving 45 manual steps. Once those students are screened, staff must prepare and send recognition letters. Next, each student’s records must be updated, requiring 17,000 transactions. Flinders’ answer to reducing this workload? Robotic process automation. The university now uses “Betty the bot” and annually saves more than 1,800 hours of staff time—nearly one FTE.

**Adding More Value**

Accounts receivable offices typically handle massive numbers of invoices with few staff. Robotic process automation can streamline the process. When a supplier submits an invoice, the procurement bot ingests the invoice, digitizes it, and performs checks (e.g., missing information, purchase order limit). If there are errors, the bot requests information. When everything is complete, workflow moves the invoice through approval and payout.
If the key to digital transformation is strategic thinking, we might ask ourselves: “What is the best use of our human capital?” What if we allow machines to use their intelligence so that we can focus on the unique ways humans use their intelligence?

Automation not only can save time and money but also can reduce risk and improve compliance. In a KPMG study, for example, procurement contract compliance improved, on average, from 30 percent to 78 percent. The results of automation can be more subtle as well. As routine work is offloaded, staff can take on more complex or personal tasks. For example, Arizona State University is relocating procurement personnel from the central office to departments to work directly with faculty and staff. Their role is to do more than buy things—they add greater value by expanding supplier relationships and using their professional expertise to address departmental needs.7

Making Time for People
Time also matters in advancement and alumni relations offices, both staff time donor/alumni time. Alumni value shorter forms of communication, not just newsletters or alumni magazines: indeed, 37 percent say they prefer receiving information via periodic text messaging.8 Texts can do more than provide information. Fundraising from mobile devices increased 205 percent in 2019. Of all mobile giving, 49 percent occurs in response to text links, saving time in multiple ways. First, there is an almost instantaneous open rate for texts. In addition, 98 percent of text messages are read, compared with just 20 percent of emails. Finally, texts are responded to within 90 seconds; emails are responded to within 90 minutes.9

In addition, artificial intelligence can save advancement staff time by improving the discovery and prospect-qualification process and gathering and synthesizing information from social media, alumni responses, and campus CRM systems. It can be used to draft personalized emails to be used in outreach, mirroring a fundraiser’s writing style. AI chatbots can start a conversation with donors, glean information, and produce viable leads. In essence, artificial intelligence frees up people to talk to people.

Being Proactive
What if machines could anticipate when there might be a problem with campus facilities (e.g., classrooms, laboratories, dorms, fitness centers)? Early warning signals can indeed predict when there might be a problem (e.g., with structure, lighting, water, HVAC, energy, equipment), alerting humans to actions needed. Anticipating and fixing problems before they occur—a process called fault detection and diagnosis (FDD)—can save time and money, reduce risks, and lead to improved performance. FDD systems can also yield energy savings, lower maintenance costs, decrease the number of service calls, and find hidden waste. An investment in FDD is repaid in slightly over one year.10

As mechanical performance declines, the cost to repair goes up, so it makes sense to correct defects as early as possible. Sensors can detect a potential fault long before a human can. Because most buildings and equipment systems are embedded with sensors, a combination of the internet of things (IoT) and artificial intelligence allows device and appliance “health” to be monitored. The goal is to use IoT to sense faults early and diagnose potential causes. This allows AI tools to predict the degradation time, the cost to fix, and the impact on human activity (e.g., poor air quality), making it possible for mechanics to prioritize the repair. A dashboard can be generated to detail what to fix and how, sorted by priorities such as energy, comfort, or cost. Once a repair decision is made, the system can schedule labor, generate the work-orders, and document completion of the repair.11
Reducing Duplication

Duplicative infrastructure or services can be costly and cumbersome. Many institutions are gaining efficiencies through sharing, consolidation, or virtualization.

In the California Community Colleges System (with 2.1 million students), each institution operates its own systems such as student information system (SIS) or enterprise resource planning (ERP) system. Separate systems make data sharing difficult, whether for internal use or for federal or state reporting. The California Community Colleges Cohort for Information Systems (4CIS), comprising four community college districts (Coast, Foothill-De Anza, Kern, and Pasadena) is piloting the development of a shared model for a cloud-based ERP to help streamline processes and realize economies of scale in back-office operations. Benefits from a unified system will include cost savings as a result of the reduced need to purchase hardware, support data centers, and hire specialized staff to manage the ERP. Estimates are that the cloud-based, standardized model will save at least $1.96 million in annual IT costs (e.g., from software licensing, hardware, and energy costs). In addition, staff will be able to concentrate on higher-value activities, such as directly supporting students and other staff.

An Opportunity to Think Differently

There are many tools and processes to choose from when we think about implementing Dx—robotic process automation, artificial intelligence, and the IoT, to name a few. However, if the key to digital transformation is strategic thinking, we might ask ourselves: “What is the best use of our human capital?” What if we allow machines to use their intelligence so that we can focus on the unique ways humans use their intelligence? If machines take on more tasks, the freed-up human time can be devoted to personal connections, innovation, and higher-value activities. We can implement Dx to automate, anticipate, conserve, and consolidate. Digital transformation can enable smarter operations, untethering people from the work that machines can do. Dx also generates data. With this data, institutions can not only track operations but also optimize resources and results.

How Can We Reach People Where They Are?

It’s time to use digital transformation to extend and enhance the college experience. Even if a campus is closed, we try to stay in touch using technology to communicate and to maintain a sense of community. Whether or not classes and staff meetings continue to be offered via Zoom or other videoconferencing systems, our recent “remote” existence reinforces the importance of maintaining the human experience in higher education and of reaching people wherever they are. Without the physical proximity of a campus, we must find different ways to learn, maintain connections, and support each other.

Being There

All professions require interaction with others. Teachers educate children. Social workers collect case histories from clients. Nurses care for patients. Hiring managers interview candidates. Communication, negotiation, and empathy are among the interpersonal skills we value in our professions. Practicing in a “safe space”—a place to try, fail, and try again—can help professionals develop and gain confidence in these interpersonal skills. Mursion specializes in creating mixed-reality environments in 2D or 3D, having had its start at the University of Central Florida as TeachLivE. For example, a teacher interacts with highly realistic and customizable student avatars. Each student has different characteristics and personalities (e.g., shy, disruptive). Various scenarios give candidates the opportunity to “try out” parts of teaching (e.g., regaining control of a difficult situation) by blending face-to-face communication with the anonymity of online environments. For example, simulations for elementary math and science teachers provide practice supporting classroom discussion while ensuring that the content is represented accurately.

Avatars can appear as coaches as well as characters. Photographic rendering, voice morphing, auto-talk, and head-tracking improve the realism of the avatars. Artificial
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intelligence, trained on large data sets, indirectly enables conversations by controlling the avatar’s body language, facial expressions, and lip synchronization. Using a “human-in-the-loop” approach, avatars are controlled by a human “simulation specialist” who can play multiple characters at one time. The technology blends real-time intent recognition and rendering, artificial intelligence, distributed networking, and bidirectional audio/video. According to one study, teachers who participated in four 10-minute simulation sessions for targeted teaching behaviors outperformed their colleagues who did not. Additional research confirms that the simulation combined with coaching results in large improvements in skills. Finally, 90 percent of teachers agreed that the avatars represent the types of students they encounter in their classrooms. Interacting with other humans via avatars thus provides a unique combination of engagement and anonymity resulting in increased self-disclosure.

Simulations are also valuable for soft-skill development (e.g., diversity and inclusiveness training). The American Association of Colleges for Teacher Education (AACTE) uses simulations for its Leadership Academy for department chairs and deans. Researchers in the Computer Science Department at the University of Virginia are exploring simulation as a way for faculty to better recognize and mitigate gender bias in lecture settings. And at the University of Texas Rio Grande Valley, the use of simulations has expanded from teacher prep to other areas such as medical students practicing end-of-life conversations.

Learning in 3D
3D holograms offer another mixed reality opportunity for enhancing the learning experience. Case Western Reserve University developed a complete male and female anatomy suite—HoloAnatomy—to teach human anatomy using 3D holograms. Students can see parts of the body (e.g., nerves that are not viewable in a human), collaborate with experts, and see what others see—in real time. The transparent visor of the Microsoft HoloLens headset allows students to see and hear each other as they interact with a digital anatomy object. Faculty can point out specific anatomical features, and students can help their classmates all while “being inside the body.” Organs can be separated, enlarged, and viewed from multiple angles. Rather than learning anatomy from a cadaver, students experience living colors and textures and see how organs function. The performance of students taught using HoloAnatomy’s mixed reality program was comparable to those using traditional methods (e.g., dissecting a cadaver). But with HoloAnatomy, 40 percent less classroom time was needed to cover the required learning. The system will soon be used by five other higher education institutions. Beyond human anatomy, 3D holograms are used in fields such as genetics, chemistry, art, dance, engineering, and paleontology.
Making Complexity Manageable

It can be hard to reach students who are distracted. The intent of much of student-directed communication is to elicit action, such as to register for classes or apply for financial aid. However, simply providing information may not be sufficient. People make decisions with imperfect information, in part because we have limited cognitive capacity. For example, students with young children have nearly 90 extra hours of tasks every week, resulting in “time poverty.” We tend to focus on what stands out, not necessarily what is most important. Behavioral science, the study of how people make decisions and either do or do not follow through, can enhance communication. When combined with texts or emails, it can provide a “nudge.”

Behavioral approaches go beyond introducing personalization (e.g., adding a student’s name at the top of a message) to understanding what actions a student has taken and suggesting the next step at just the right time. Behaviorally designed communications improve outcomes by getting attention, tailoring the message, and making action easy. Research has shown than altering just 3 percent of words in a message can make a difference.

Nudging can be helpful with financial aid—which is a critical stumbling block in many students’ enrollment and retention success. Financial information is complex and confusing. Text nudges can simplify and break down complicated tasks into more manageable messages. Proactively sending out action items around deadlines ensures that the right messages reach students at the right time. In a randomized control trial involving 63,000 Arizona State University students, a series of eight emails were sent over eight weeks to students and their parents, providing them with reminders and instructions that made it easy to execute the next step needed for financial aid. Admissions increased from 29 percent to 50 percent when both student and parent received the emails. Had all students received such messages, an estimated 1,124 additional students would have filed the Free Application for Federal Student Aid (FAFSA), receiving $27 million more in financial aid. The cost of the program, if scaled across all continuing ASU students, was estimated to be less than $0.15 for each additional student who filed before the deadline.

Borrowing money can be problematic for students as well. They may lack information about loans (e.g., how much is too much or too little, how much their monthly payments will be) and access to counselors who can help. In a randomized controlled trial at the Community College of Baltimore County (MD) students received a series of eight text messages. As a result of the campaign, students borrowed 9 percent less in total Stafford loans (from $2,401 to $2,218) and 12 percent less in unsubsidized Stafford loans (from $1,301 to $1,156). The declines were most significant—10 percent to 27 percent—among students with the lowest incomes.

Coping with Stress

Even before the pandemic, students’ mental health was a concern: in 2019, roughly 9.2 million students experienced a diagnosable mental health issue. In April 2020, 80 percent of students surveyed said that COVID-19 had negatively affected their mental health; they most commonly cited stress or anxiety, disappointment or sadness, loneliness or isolation. A COVID messaging framework (see figure 1) can help institutions reach students with regular, direct communication that helps them prepare for the “next normal.”
Actions required to comply with a new policy, such as a COVID-19 form, can be texted just-in-time. To alert students who may have been exposed to the virus, a text generated by the contact tracing system can direct a student to schedule time with a contact tracer. The text can also ask, “How are you feeling?” Depending on the response, the student might be directed to the health center for testing or a professional might intervene. AI-powered automated responses, interwoven with personal interactions, can individualize messages, encourage two-way communication, and direct students to resources, as well as show empathy and understanding for the stress they are experiencing.

**An Opportunity to Think Differently**

It is easy to think of the college or university as a place. But higher education is also about services, support, and connections. Today, the backbone of the college experience isn’t just the physical environment but also the digital one. Using data, might institutions sense and respond to students’ needs with more tailored experiences? Institutional leaders know a lot about students thanks to data. A college or university can “reach people where they are”—not just in a classroom but at the point of need. What does an anatomy student need? One answer might be a cadaver lab. Another might be a holographic 3D experience that integrates the digital and the physical. What does a student who is at risk of losing financial aid need? Perhaps a text-based nudge that is individualized to precisely the action that the student needs to take, right now. For a student who needs to learn how to be a more effective teacher, perhaps the answer is a human-in-the-loop simulation. Could we transform higher education if the “experience” was predicated on a need and not only a place?

**What Would Make Us More Resilient?**

Many campuses closed in March 2020 due to COVID-19. Some may reopen in the fall of 2020; others may not. Whether for three months or six months or a year, we are all having different experiences now, in changed environments—videoconferencing, working from home, maintaining our distance. Those experiences are reshaping our expectations. Whether it is changing expectations or a changing environment, can our institutions become more resilient and ready for what comes next?

Resilience is the ability to sense and respond to change. It can be a personal attribute or an institutional one. Resilience can mean identifying and mitigating risks before a potential crisis. It also can mean being able to bounce back quickly after a crisis. Now is the time to use Dx to build long-term resilience for higher education.23

**Skills as a Source of Resilience**

COVID-19 is creating a new economic landscape in which skills will be an important source of resilience. People who have lost jobs may need to reskill for new roles. New technologies and new ways of working will require others to upskill. College/university graduates

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**Figure 1. COVID Communication Framework**

<table>
<thead>
<tr>
<th>AWARENESS</th>
<th>ACTION</th>
<th>SUPPORT</th>
<th>TRIAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVID Compliance</td>
<td>Alert students to new expectations with clear process timelines</td>
<td>Engage students to take action with ties to desired activities</td>
<td>Offer students escalated levels of guidance and easy lines to expectations</td>
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<tr>
<td>Testing Practices</td>
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<td>Tracing Practices</td>
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<td>Policy Updates</td>
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<td>Facilities Access</td>
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<td>Virtual/Online Support Services</td>
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<tr>
<td>RISK TO INSTITUTION</td>
<td>RISK TO PROGRAM</td>
<td>RISK TO SELF</td>
<td>RISK TO OTHERS</td>
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With the anticipated decline in traditional as well as international students, revenue generated by credentialing programs is increasingly attractive as a supplement to tuition dollars.

are not exempt; they may need to retool quickly to adapt to a rapidly shifting economy.

For example, a graduate may need digital skills for career advancement. Rather than pursuing another degree in computer science, the graduate may simply require a credential in Python. Or someone with an accounting degree may be finding more opportunities in cybersecurity. Rather than starting over again, the graduate could bundle the degree in accounting with a global information assurance certificate (GAIC) to qualify for a cybersecurity position. Students, workers, and educators want to know which fields are growing or stagnating, the quickest path to various careers, and earnings over time. Understanding the skills needed for a career, not just the degree or coursework, may provide resilience.

Having a common skill language is a prerequisite to matching skills-sought to skills-taught. Using machine learning, extraction, and cluster analysis, the labor market analytics firm Emsi has created a skill-tagging system that can translate job postings, resumes, or syllabi into a frequently updated, common skills library. With over 30,000 defined skills, the library provides much greater granularity than the 974 occupational codes historically used to describe the US workforce. Individuals can gain additional resilience by understanding what skill(s) might position them for a promotion and how their existing skills qualify them for different career paths. The skills developed by English majors, for example, might make them 85 percent qualified for a role in digital marketing—an area of job growth that rivals the growth in some areas of information technology. Credentials in search engine optimization (SEO) and cloud computing skills might allow an individual to qualify for marketing or advertising roles that require a combination of writing ability and technical savvy. Tools can help individuals inventory their current skills, match their existing skills to job postings, and identify skills that prepare them for what’s next.

**Personal Resilience**

Resiliency is needed in many types of situations. Resiliency can help someone overcome personal barriers to success (e.g., family, finances) or community barriers to success (e.g., natural disasters, racial discord). Resiliency is critically important in some professions, such as health care.

In 2013, in the aftermath of major US disasters such as Hurricane Sandy and the Boston Marathon
bombings, seven community colleges, in partnerships with Achieving the Dream, formed the Northeast Resiliency Consortium (NRC) to create materials that would help students develop resiliency. The intent was not just to prepare for disasters but to assist individuals in addressing the continual need to reinvent themselves. The colleges developed a resiliency competency model and integrated those competencies into the curriculum along with adaptive learning tools.

The NRC resiliency competency model defines the knowledge, skills, and resources that help students to persist during times of crisis as well as to thrive at work and in their personal lives. In the Dot Resiliency Series, ten lessons—involving animations, simulations, and adaptive and game-based learning—build the learner’s resiliency. Using a conversational approach, the learner teaches an AI character, “Dot,” about human resiliency. As the learner progresses through a lesson, he or she will be guided down relevant pathways with games, puzzles, and challenges and then will be given differentiated feedback and individual support. Students reflect on their own experiences; “Dot” helps them practice new skills.

Today, resilience is integrated into many campus orientation sessions as well as courses in the belief that wellness is an important life skill that students can carry into their careers. Topics may include resilience training, optimistic vocabulary training, and stress management. The University of Pennsylvania Law School goes beyond personal health to focus on wellness through the lens of professional responsibility. Its required, upper-level course emphasizes lawyers’ ethical responsibility to take care of themselves in order to take care of their clients.

Operational Resilience
Institutions also need resilience. Digital transformation allows institutions to adapt operations in times of discontinuity. For example, when students at Case Western Reserve University had to leave campus in mid-March due to COVID-19, HoloLens mixed reality devices loaded with the digital anatomy curriculum were sent to about 200 medical school students so that they could continue to learn from home. And since avatars aren’t contagious, AACTE and Mursion collaborated in May 2020 to provide teacher candidates with an opportunity to complete clinical field experiences remotely without compromising anyone’s health and safety.

Fault detection and diagnosis (FDD) has preserved continuity and optimized operations even during COVID-19. While the University of Iowa has been in stay-at-home mode, there have been few building occupants to call in a problem and no staff to investigate and respond. The buildings have the system intelligence (i.e., FDD) to discover failures or faults on their own, without the need to send employees to check spaces. And as buildings are reoccupied, the ventilation and filtration provided by heating and air conditioning systems will take on new importance because of the airborne transmission of the virus. FDD will allow the review of ventilation and fresh-air volumes, ensuring that underventilated spaces (which might have a higher concentration of virus particles) are quickly identified and corrected.

Financial Resilience
Resilience may never have been more important for higher education finances than now. Financial pressures are accelerating interest in alternative revenue sources. With the anticipated decline in traditional as well as international students, revenue generated by credentialing programs is increasingly attractive as a supplement to tuition dollars. Creating a credentialing program does not necessarily require starting from scratch, however. Institutions can repackage the knowledge and skills in existing degree programs. Skills can be identified within a course and then “unbundled” or broken into components. Those components can be reassembled to create micro-credentials both as alternatives and as supplements to a degree. For example, business intelligence tools like Tableau may already be taught in the business or IT departments while principles of design are covered in a media arts program. These skills can be rebundled into a data visualization credential that could help a working business analyst upskill or pivot to a new role. Gaining experience with micro-credentials might be both a current and a future institutional resiliency strategy: a 2018 US survey of human resource professionals indicated that within five years, micro-credentials and digital badges may be potential challengers to degrees in the hiring process.

One potential market for micro-credentials are employers who have increasingly invested in “education as a benefit.” The corporate tuition reimbursement market is estimated at $20 billion. And 37 million Americans have some college credit but no degree, representing a larger market than the traditional 18- to 22-year-old population.

Interconnectedness
Students and workers, as well as educators and employers, are connected through education, skills, and employment. A poor connection between any of
these segments can cause the entire system to slow or stutter. “Big data” approaches, combining real-time labor market information (e.g., millions of unique job postings and professional profiles) with analytical methods, can extract the skills that employers are looking for and can reveal how skills-needed compare with skills-available in the regional workforce. Supply-and-demand data, along with active engagement with employers, allows educational providers to design and refine program offerings, curriculum, and credentials that are tightly coupled with labor market demands.30

The Business Higher Education Forum (BHEF) is leading a collaboration among regional employers, higher education institutions, and workforce/economic development agencies. The goal is to close skill gaps in digital technologies (e.g., data analytics, cybersecurity, cloud computing, networking, artificial intelligence, machine learning) through the following actions:

- Employers will develop customized upskilling agendas by mapping career pathways and identifying relevant programs.
- Colleges and universities will align skills-sought to skills-taught by automated competency mapping and will develop micro-credentials to meet the needs of employers and learners.
- Blockchain will be used for credential management.

The intended outcome is to develop new talent, upskill current employees, and ensure that women and underrepresented minorities are engaged in all talent strategies.31 The ultimate goal is resiliency—for individuals, educators, and employers—that will lead to economic vitality.

An Opportunity to Think Differently

Beyond focusing on “getting back to normal,” perhaps we should also be finding ways to become more resilient. Much of the COVID-19 experience has been about taking an analog experience and making it digital (e.g., remote learning). The shift had to happen quickly—there was no time to think about transformation. Do we now have an opportunity to think differently about the shifts ahead?

Part of the value of the college experience is the “coming of age” process. Can we reimagine how to achieve that growth in less time and/or with a different use of space? For example, what if students came to campus in three-month increments instead of for nine months? Can a “gap year” become a valuable part of the college experience? Another critical aspect of higher education is preparing for a job after graduation. Should students cycle more often between courses and internships? Should we proactively integrate skills-based learning with disciplinary programs? A third part of the college experience is “enlightenment,” when students learn much more about the world and themselves. Can that be digitally transformed?

In a world that was already changing rapidly before COVID-19, perhaps we could all benefit from resiliency—not just to reduce personal stress but also to help us think differently.

It’s Time

Digital transformation comes in many forms—only a few of which are described here. It’s time to use digital transformation and strategic thinking to address the three unavoidable challenges ahead: financial pressure, challenges to the college experience, and ongoing uncertainty. Asking the right questions, not just using the right technologies, will lead us to the best answers.

Choosing what not to do doesn’t mean that the work goes undone. Technology is altering the day-to-day mix of activities. Some activities can be done just as effectively, if not better, by machines, freeing people’s time for other things. Machines use their own intelligence,
not ours. Humans are necessary to leverage the full potential of these technologies.

Physical proximity is not the only way we can be together. Because higher education is about connections, thinking about how we reach people wherever they are is more important than ever. This involves more than providing information and more than offering remote learning. That “reach” must be made effective and engaging—academically, socially, and emotionally. Doing so is about moving people from where they are to where they need to go next. It is about being sure people see their potential and reach it.

Resilience, the process by which we sense and respond to change, will help sustain higher education. While many things have changed, the mission of higher education remains the same. Our processes might shift to shorter degree times or to credential programs or to closer linkages with industry. The adaptations won’t be arbitrary, they will be based on data, experiences, and needs.

We may think that we don’t have time for digital transformation right now. But if we make time for it, time may be what we get in return.

The last few months have taught everyone in higher education a lot about our digital capability, our agility, and our needs. Now is the time to capitalize on what we’ve learned to make higher education stronger. It’s time for digital transformation.

Notes
9. Ibid.
18. CAEL and ideas42, “Student Parents and Behavioral Science” (2020).
21. Ibid.
24. The seven colleges are Atlantic Cape Community College (NJ), Bunker Hill Community College (MA), Capital Community College (CT), Housatonic Community College (CT), Kingsborough Community College (NY), LaGuardia Community College (NY), and Passaic County Community College (NJ). See Achieving the Dream, “Seven Community Colleges and Two National Organizations Join Forces to Aid Workforce in Distressed Northeast with $23.5 Million,” news release, October 30, 2013. NRC received a $23.5 M grant from the US Department of Labor to develop the program.
27. Personal communication (email) with Don Guckert, University of Iowa, May 18, 2020.
31. Personal communication (Zoom) with Jennifer Thornton, Vice President of Programs, BHEF, May 14, 2020.

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