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Digital Transformation and Technology Narratives

We all have a technology narrative that shapes our understanding of the change going on around us. For younger professionals and retired CIOs alike, these narratives are often transformation stories. When it comes to teaching and learning, whether our early stories of educational technologies feature punch cards, AV carts, first-generation LMS software, or tablets, the drumbeat of digital change has been continuous and quickening for decades. Most recently, these advances are less and less ad hoc developments or one-off innovations; instead, digital transformations are ever more interdependent, more interrelated, and—thanks to standards-promoting organizations like IMS Global—more interoperable than ever before.

I’ll be the first to acknowledge that phrases like digital transformation are used so much in the hype-filled edtech universe that the meaning has somewhat eroded, but we’ve all experienced this kind of comprehensive change numerous times. Isolated breakthroughs and sporadic innovations are giving way to this more expansive kind of systemic change. It doesn’t seem that long ago (it was 2016) when educational publishers Cengage and Pearson saw more than 50 percent of their business in digital form. Then, in the last month of 2017, Cengage announced its new “unlimited” pricing model for digital content. No doubt, reports of the demise of traditional textbook pricing are premature, but anyone paying attention can see that textbooks are no longer expected to be either exclusively text-based or completely book-like. Something more transformational is clearly under way.

One colleague tells me that her “tipping point moment” was the Jill Watson artificial intelligence (AI) teaching assistant story from 2016. We don’t hear a lot about Jill Watson in 2018, but we do hear about how, for the first time, an AI neural network model scored higher on Stanford’s reading and comprehension test than humans. Dramatic versions of these not-so-dramatic events usually involve one or two more exclamation points than they deserve, such as Newsweek’s headline, “Robots Can Now Read Better Than Humans, Putting Millions of Jobs at Risk.” These kinds of stories hit our newsfeeds long before the technologies involved have matured or, in some cases, even taken shape. Nevertheless, in spite of the hype, the nature of digitization—its depth, breadth, reach, and likely scale—is transforming our world in appreciable and important ways.

With the print issue of the magazine and additional online articles in the March/April 2018 timeframe, EDUCAUSE Review will focus on this digital transformation in the context of teaching and learning. For example, in “Four Tools for Leaning into the Future in Times of Rapid Change and Innovation,” Bernard Bull helps us to map this world of unceasing technological change by suggesting specific tools that can help higher education IT professionals decide which technologies are worth our attention; recognize transitional technologies; predict the future of educational innovations; and understand options for thinking about and preparing for the future of learning organizations. In another feature article, “Architecting for Learning Analytics: Innovating for Sustainable Impact,” Simon Buckingham Shum and Tim McKay pose the question: “How can an institution architect itself . . . to innovate pedagogically and analytically in order to tackle substantial, strategically important teaching and learning challenges?” Shum and McKay explore three organizational models for analytics infrastructure and advocate for an autonomous, hybrid innovation center approach.

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What does this digital transformation mean for students? The MyWays project (https://myways.nextgenlearning.org/), from the EDUCAUSE Next Generation Learning Challenges (NGLC) initiative, addresses this and related issues. As NGLC Director Andy Calkins asks: “What can schools and higher education institutions do to ensure that graduates enter their ‘wayfinding decade’ with the competencies, learning orientation, and agility they’ll need to be successful in the 21st century?” In an excerpt from Report 8, Grace Belfiore and Dave Lash explore “creative know how.” Although the need for schools to address “know how” as well as knowledge has been established, the authors add: “We are beginning to realize just how creative (or adaptive and transferable) that know how must be to prepare learners, in essence, for the unknown—for jobs not yet invented, for the impact of AI, and for engaging with others in ways that evolve every few years.”

Moving beyond teaching and learning, digital transformation is affecting the entire higher education enterprise, of course. Yet evidence from EDUCAUSE research shows that comprehensive approaches to digital transformation are not evenly distributed. Around one-third of institutions in our 2018 Strategic Technologies and Trends show clear signs of campus-wide digital strategy either already in place (3%) or exerting a “major influence” (28%) on their emerging IT strategy. On the other hand, over half of institutions report that they either have already incorporated the idea of “IT as an agent of institutional transformation and innovation” into their IT strategy (8%) or are seeing it as a “major influence” (44%). Finally, the three trends at the top of the “Most Influential Trends” list—complexity of security threats, student success focus/imperatives, and data-driven decision-making—all extend beyond information technology alone and even beyond single-campus divisional responsibility. They are both comprehensive and transformative in risk, urgency, scope, or all of the above. We will be further exploring the digital transformation of the enterprise in the May/June 2018 issue of EDUCAUSE Review.

The ongoing story of digital transformation, in the sense of moving analog teaching and learning materials and other higher education resources into digital form, has captivated us for many years. Today, in 2018, this story is a chapter in a larger technology narrative. At the same time that technologies are changing dramatically, the very stature of technologies at colleges and universities has also undergone a transformation. Technologies, whether they are related to research, the classroom, or student success initiatives powered by analytics, are not working silently in the background like a water tap waiting to be turned on or an electric switch waiting to be flipped. Rather, these and related technologies are mission-critical strategic assets that determine in many respects how well an institution is able to accomplish its strategic objectives.

Notes


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