

Report from the 2018 EDUCAUSE Task Force on Digital Transformation

NOVEMBER 2018

Executive Summary

Digital transformation (Dx) is having a profound impact across all industries, and higher education is no exception. What we are experiencing today is a seismic shift as the diverse digital landscape becomes woven throughout everything we do. This shift suggests a continuing and accelerating evolution of the higher education institution as well as IT's place within it. It requires not only an awareness and understanding of the transformation, but action and change to adjust and adapt traditional practices to today's technology-enabled and -driven world. Given its proximity to the pace and scope of digital change, the IT organization has a unique opportunity to contribute to and participate in institutional transformation.

A hallmark of a digital transformation is a focus on the interplay between strategy and technology to enable an institution to adapt to environmental circumstances that are changing both quickly and radically. Technology adoption alone will not bring about digital transformation. Modernizing an ERP (enterprise resource planning) system, for example, will not by itself result in digital transformation, nor will installing the latest in classroom technologies. Instead, Dx focuses on the intersection between technology and institutional strategies, and then shapes digital architecture, applications, campus organizations, workforce, and staffing to achieve strategic goals.

For some time, the role of IT has been evolving from that of technology provider to that of service provider. Dx is a new phase in that evolution; in this phase, IT becomes a trusted advisor and strategic partner, intrinsic to the institution's strategic mission and goals.

The Dx Task Force

In 2018, EDUCAUSE convened a group of nine IT leaders to discuss what Dx means to higher education IT and to consider what EDUCAUSE should do to help members understand and embrace Dx in a way that positions them to provide leadership for their own institutional efforts in this evolution. As the "Dx Task Force" sidebar shows, participants included representatives from different perspectives within higher education, with varying areas of subject-matter expertise and experience. Over the course of several telephone meetings and one

face-to-face meeting, the group discussed the role of Dx in higher education with two goals in mind:

- Goal 1: Develop a definition of digital transformation appropriate to higher education that can be used across EDUCAUSE programs and offerings.
- Goal 2: Issue recommendations for how EDUCAUSE can help its members understand the importance of digital transformation and position their institutions to move forward with it in areas such as the IT organization and leadership, workforce and staffing, and analytics.

The EDUCAUSE Dx Task Force

Digital Transformation Task Force Members

- Brendan Aldrich, Chief Data Officer, California State University, Office of the Chancellor
- Mark Askren, Vice President for Information Technology, University of Nebraska
- Josie DeBaere, Director of Technology Architecture, Boston University
- Joe Moreau, Vice Chancellor of Technology and CTO, Foothill–DeAnza Community College District
- Amy Pearlman, Director of Client Services and IT Procurement, Bryn Mawr College
- Jim Phelps, Director, Enterprise Architecture and Strategy, University of Washington
- Matthew Rascoff, Associate Vice Provost, Digital Education and Innovation, Duke University
- Jennifer Sparrow, Senior Director of Teaching and Learning with Technology, The Pennsylvania State University
- Dave Weil, Associate Vice President and Chief Information Officer, Ithaca College

EDUCAUSE Staff Liaisons

- Lead: Betsy Tippens Reinitz, Director, Enterprise IT Programs
- Malcolm Brown, Director of Learning Initiatives
- Karen Wetzel, Director, Working and Community Groups

The task force likened the impact of Dx to that of the industrial revolution and electrification. We're experiencing a period of great disruption driven by technology advances, similar to how the advent of motorized vehicles during the industrial revolution completely transformed transportation and the economy. Similarly radio and TV grew out of electrification, creating new classes of jobs, skills, and competencies that had not previously existed.

The current disruption will lead to new technologies, careers, and societal changes that are currently unknown to us. Forces are already at work that threaten the traditional practices of higher education, and colleges and universities need to start changing and adapting now if they are to survive and prosper into the future. Increasing financial pressures, decreasing political support, a declining secondary education population, increasing student debt, and the questioning of higher education's value all combine to suggest that we must rethink our traditional methods, processes, and business models.

Stakeholders Need to Hear...

- *Transformation is upon us.* A proactive approach will give the institution a competitive advantage.
- *The pace of change is accelerating.* If institutions take a wait-and-see position, change may overtake and bypass them. The IT organization is a key asset in the institution's efforts to navigate the changes associated with Dx.
- *Agility is critical.* This includes both technology and business process agility.
- *Adaptability is important.* To deal with uncertainty surrounding Dx's impact, higher education must develop competencies in adaptability—especially with respect to institutional culture.

Incremental change will not make enough of a difference quickly enough. Higher education must leverage Dx to create the type of flexible, agile, and innovative environment required to thrive. Some argue that traditional higher education is risk averse; it is certainly slow to change. Institutions must increase their risk tolerance, shifting their focus from risk *aversion* to risk *management* as part of an institutional strategy that focuses on customer needs and user experience.

Dx is challenging higher education to make a renewed and serious commitment to student success. Traditional assumptions—such as an undergraduate student's ability to complete a degree in 4–5 years—no longer hold. For many students, the “college years” are becoming a mix of occasional engagements in various institutions that could take as many as fifteen years before attaining a degree. To tie those fifteen years together meaningfully, institutions need to think differently about the student experience. Additionally, the task force suggested that higher education needs to focus on educating students for jobs or even careers that do not exist yet, requiring institutions to instill in students the skills, competencies, and capabilities that make lifelong learning possible.

Students are arriving on campus (or online) with a consumer outlook, and they're comparing their higher education experience to their experiences in other aspects of their lives. Student engagement is key to Dx; students expect to engage seamlessly with the institution and each other and to use data to guide them through their experiences.

Faculty members urgently need to change their approach through Dx as well. Through the use of data, faculty and support staff—such as instructional designers—can better understand their students and design learning engagements that better support their needs. Data- and evidence-based pedagogical decisions must become the new norm.

Researchers will also have new opportunities for collaboration and global reach in terms of both data and partners. Digitally transformed institutions will favor researchers who have a highly collaborative approach and who also include students as collaborators and contributors. Digital technologies, including those that use ever-greater computational capacities (e.g., quantum computing) and XR (e.g., virtual reality, augmented reality, and mixed reality) simulations, will constantly open new opportunities for academic research.

To deal with all of these challenges, the IT organization must evolve into the role of business transformation partner, and IT staff must evolve with it. Workforce development is becoming a critical consideration within IT, and that development needs to be ongoing, always looking several years ahead to create the kind of agile and flexible environment required to enable Dx.

Dx is not purely an IT opportunity; it is institutional in scope in nearly every dimension. However, the campus IT organization is in a position to both recognize possible innovations and plan for and create the flexible infrastructure and architecture needed to support those innovations. The technology itself cannot act as a transformation agent in this work; IT can be a transformation agent, but it must partner with leaders across the campus to truly re-create the institution.

Findings

Goal 1: Develop a Dx definition that is appropriate to higher education and can be used across EDUCAUSE programs and offerings.

The term “digital transformation” has many connotations and has been used in many different ways, both in higher education and across industry. Thus, one of

the task force's first goal was to develop a Dx definition that would help EDUCAUSE members understand its relevance to higher education and move beyond the hype of the phrase. The task force developed the following definition:

Digital transformation is a cultural, technological, and workforce shift. In its cultural dimension, it requires a new approach to how campus leaders interact with each other as well as an emphasis on change management and a movement toward institutional agility and flexibility to meet quickly changing needs. For IT, this means adopting a role of strategic and transforming partner in alignment with institutional mission. IT leaders and their organizations must model digital transformation by adopting innovative practices and creating new digital architectures that provide unprecedented agility and flexibility to enable the institution to rapidly and efficiently achieve its strategic aims. Digital transformation also has broad implications for the institutional workforce, requiring dramatic shifts in workplace skills at all levels and professional development that enables the workforce to keep pace with the rapid tempo of change.

Digital transformation is being driven by technology trends and changes that include advances in analytics, artificial intelligence, the cloud, mobile, consumerization, social networks, and storage capacities. Those drivers are enabling a new approach to everything from digital architectures to how campus leaders interact with the IT organization, all with the expected outcomes of new business models, improved student outcomes, different teaching and learning methods, and new research capabilities.

Goal 2: Issue recommendations for how EDUCAUSE can help its members understand the importance of digital transformation and position their institutions to move forward with it in areas such as the IT organization and leadership, workforce and staffing, and analytics.

The following recommendations grew out of task force deliberations. Taken together, these recommendations will substantially improve the capacity of the EDUCAUSE community to understand and foster digital transformation initiatives at their institutions:

1. **Develop an EDUCAUSE strategic goal for 2019 related to Dx** to provide direction across EDUCAUSE for developing products, events, and services to support Dx-related shifts in workforce, technology, and culture. The task force felt that Dx work has some urgency to it. The level of effort

required for EDUCAUSE to make a difference in this area will necessitate a focused strategy in the coming year.

2. **Adjust current EDUCAUSE materials to reflect a focus on Dx.** The task force suggested that quick wins may be possible by updating current materials as follows:
 - a. Weave Dx threads through EDUCAUSE blogs and *EDUCAUSE Review* articles, and tag new and existing EDUCAUSE materials relevant to Dx.
 - b. Audit the Core Data Service (CDS) for existing and potential Dx competencies and inject Dx questions into future CDS modules.
 - c. Include work and materials related to Next Generation Digital Learning Environments (NGDLE) in Dx work (see the sidebar for more information).
3. **Design and develop a webpage** to house [Dx resources](#). A separate [Dx-branded webpage](#) will help EDUCAUSE members locate and make sense of existing and new resources. The web pages also can become a hub for potential expansion of Dx efforts in the future.
4. **Design and develop a digital transformation communication toolkit** to help IT leaders convey Dx implications and opportunities to key stakeholders. This may include printed materials, such as infographics or brochures, as well as templated slides, checklists, and talking points. The task force suggested that communication efforts start with top-level institutional leaders such as presidents, chancellors, and C-suite positions, as this support for Dx efforts is a critical component of success.
5. **Produce a series of products that focus on the key areas of impact** (workforce, technology, and culture). Task force suggestions for products included presenting brief examples from institutions that demonstrate success with Dx, a journey map showing student experiences across their engagement with an institution, scenarios for what a digitally transformed institution may look like, or specific tools to assist members with the Dx shift in each of the three areas of impact.
6. **Design and implement professional learning opportunities** that focus on Dx competencies, or weave Dx threads throughout existing curricula.

7. **Address Dx work through relationships and partnerships** with other higher education associations.
8. **Continue to rely on Dx task force** members to advise EDUCAUSE on an as-needed basis.

The Next-Generation Digital Learning Environment (NGDLE) and Dx

In many ways, EDUCAUSE's work around the concept of NGDLE anticipated its broader expression in the Dx project. After all, both efforts

- focus on the transformation of the academy,
- emphasize leadership and change management, and
- recognize the importance of [agile and flexible digital architecture](#) as a key enabler of transformation.

Indeed, we can view NGDLE as the expression of Dx in the teaching and learning community. Building on the NGDLE's momentum will then further advance the Dx concept on the academic side. In connection with its work with the higher education community on Dx, EDUCAUSE will continue to advocate for and support advances in progress toward the envisioned goals for the NGDLE.

Conclusion

Dx is well under way in many industries, and its impact on higher education is inevitable. IT leaders can play a critical role by 1) helping their institutions understand the urgency and potential of Dx, and 2) designing the architecture and infrastructure that will enable it. However, IT leaders who don't help with the shift toward Dx will likely find their role in the institution diminished to simply keeping the lights on rather than influencing and enabling institutional strategy and goals. By leading the Dx transformation, IT leaders can play a key role in helping their institutions develop new business models, improve student outcomes, design new teaching and learning methods, and institute new research capabilities.

About EDUCAUSE

EDUCAUSE is a nonprofit association and the foremost community of IT leaders and professionals committed to advancing higher education. EDUCAUSE programs and services are focused on analysis, advocacy, community building, professional development, and knowledge creation because IT plays a transformative role in higher education. EDUCAUSE supports those who lead, manage, and use information technology through a comprehensive range of resources and activities. For more information, visit educause.edu.

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