

Chapter 68

Leading Digital Transformation in Higher Education: A Toolkit for Technology Leaders

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ABSTRACT

The pace of innovation continues to accelerate. Students expect campuses to keep pace with the technology they use in their daily lives, and the technology they will likely need to use when they enter the workforce as graduates. Students and their families now pay more of the costs associated with earning a degree, and they want to have a voice in campus planning and decision making. Higher education technology leaders will need to help their campuses shift from incremental adoption of disparate technologies to digital transformation. Digital transformation includes adopting innovative technologies to transform mission critical activities and optimizing related processes and data with the objective of increasing customer satisfaction and providing an excellent end user experience. To guide digital transformation, technology leaders in higher education need a toolkit to build buy-in and facilitate cultural transformation on their campuses.

INTRODUCTION

Technology leaders in higher education can empathize with Cassandra of Greek mythology. Technology leaders try to illustrate the opportunities that digital transformation can offer their campuses in essential areas such as teaching, learning, advising, fundraising, and administration. Sometimes these prognostications receive a daunting level of resistance or a confounding lack of interest. Higher education technology leaders need to help their campuses envision and implement a digital future that preserves core values and embraces strategic innovations more broadly, deeply, and rapidly. In simplest terms, “digital transformation means transforming an organization’s core business to better meet customer needs by leveraging technology and data” (Clark, 2018). For example, in higher education digital transformation

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could involve a strategic, campus-wide effort to plan, implement, and adopt an integrated ecosystem of advising technologies powered by data analytics to improve student persistence and graduation rates. Labeling students as customers causes some campus members to bristle; nevertheless, “Money is exchanged, debt is incurred, and a valuable asset in the form of a degree, certificate, or badge is obtained” (Stoller, 2014). Technology leaders tend to view everyone they serve as a customer. Higher education does itself a disservice by rejecting customer-centric concepts on principle. A distinction should be made between digital transformation and initiatives that result in incremental improvements or innovations that have transformative effects on a small target audience. According to Harvard Business Review, “a digital transformation occurs when you use digital technology to change the way you operate, particularly around customer interactions and the way that value is created” (Libert, Beck, & Lind, 2016). Digital transformation is not a one-and-done project or initiative; it can and should be repeated selectively. When enculturated, digital transformation becomes the approach the organization uses to achieve many of its strategic goals.

The private sector regularly introduces disruptive innovations by leveraging technologies such as the Internet of Things (IoT), artificial intelligence, and machine learning (Sastray, 2018). What about higher education? A couple of universities, such as Western Governors University and Singularity University, receive recognition as innovators in pedagogy and curriculum, but the list of examples is not very long. Entrepreneurial campuses, such as Georgia State University, that use a strategic blend of data, technologies, and cost-effective, time-tested practices are ahead of many of their peers (Quinton, 2013). How will traditional universities embrace digital transformation when there is so much dissonance between the pace of change in academia and the pace of technical innovation? Technology leaders in higher education need a robust toolkit to address this conundrum.

BACKGROUND

The Defense Advanced Research Projects Agency (DARPA) and scholars affiliated with research universities such as MIT and UCLA collaborated to develop the network of networks that we call the Internet (Leiner et al., 1997). The technology leadership role once played by higher education lapsed in the dot com and post-dot com eras as the Internet evolved from a predominantly public-sector resource to a predominantly commercial resource. Some universities have innovative research centers such as the National Center for Supercomputing Applications at the University of Illinois Urbana-Champaign. Typically, universities adopt technology innovations at an unhurried pace. When the pace of innovation was slower, universities could exert more control over the pace of adoption. A couple of decades ago, email accounts and File Transfer Protocol (FTP) were for power users, and universities were deciding if they wanted to have websites. These things were still optional in the mid-1990s. They are not optional now, and these technologies, or their successors, are ubiquitous at all universities. Although digital transformation may seem optional now, it will likely become commonplace in the future much like email, FTP, websites, etc. Universities that are effective early adopters of digital transformation will differentiate themselves from their peers.

Higher education has experienced periodic revolutions such as the Serviceman’s Readjustment Act of 1944, the coupling of accreditation with federal financial aid programs, and the civil rights movement (Thelin, 2004). In the early 2000s, some thought that for-profit universities like the University of Phoenix might eat the lunch of traditional universities by bringing economies of scale to the design,

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