Managing Constant Change

If you are in higher education using technology, you may often feel like your hotly anticipated, recently purchased technology solution is obsolete by the time the delivery person drops it off. If we are truly on “the back half of the chessboard,” the rapid pace of technological change will only continue to increase. Depending on your view, this either causes constant disruption or presents constant opportunity. Are you being disrupted? Or are you the disruptor? How should the academy—bound by deep tradition and extensive regulations—manage this increasing onslaught of change?

I strive to maintain a positive, yet skeptical, attitude toward change. Whenever I use in-flight Wi-Fi, for example, I try not to be distracted by the slow connection. Instead, I marvel at the fact I am in a tube traveling 500–600 miles per hour, through the sky, able to share photos of clouds to friends on the ground. When I publish an app, I try not to get frustrated by design or code challenges. Instead, I am amazed that my virtual product will be available instantaneously in infinite quantity around the world. It is important to remember how much has changed since eighteen-year-olds were in middle school. The barriers to creative, innovative, and entrepreneurial ventures with technology are lower than ever before. Technology offers an extraordinary opportunity for real-world learning, as well as global feedback to academic institutions.

Simultaneously, it’s easy to be frustrated by the pace of change. A competitive nature, combined with a desire to experience the newest technology, creates an unwinnable situation. You may win a small battle (“I got my iPhone 6 Plus first: come marvel at my awesomeness!”), but the rapidly changing landscape means you can never win the war. Most of us have faced the tough choice of a mid-semester update to software or hardware. Furthermore, technology changes much faster than the related administrative structures surrounding its acceptance and implementation.

A universally accepted administrative paradigm has yet to emerge for higher education to handle a disruptive technology. Should it be part of the IT organization? Should it be part of a campus-wide academic program? Should it be handled by individual academic departments on a case-by-case basis? There are obvious pros and cons to each approach. But how do we encourage creativity and curiosity while keeping our data secure, financially managing our technology, and most importantly, providing an ongoing infrastructure to support the learning and research mission of our institutions? How do we best handle disruptive, pervasive, “non-infrastructure” projects while responsibly building the excitement of faculty, staff, and students?

At Ball State University, we tackled these challenges by creating a nimble administrative unit that puts professional staff and student employees side by side in a fast-paced, project-oriented work environment. With the strong support of our visionary CIO, Phil Repp, my Emerging Technologies and Media Development unit has developed a system, refined over the past six years, that provides the right balance, safeguards, and administrative lattice to support the academic side of the institution at the pace of technology. At the core of the unit are eight diversely skilled professional staff members. The student employees (known as the “Digital Corps”) average around forty in number and come from across the campus. Because students graduate and move on, at least 80 percent of the office turns over every three years. This ratio provides a constant source of new ideas and fresh approaches (along with new interests in technology) while maintaining enough consistency to keep projects moving forward and institutional memory intact.

In the Emerging Technologies unit, we divide technology into three longitudinal foci: experimental, disruptive, and pervasive. Experimental technology is our playground. We test new gadgets and see what future value they might have for the academy. Frequently, experimental technology has little practical value, but occasionally it is the solution to a problem discovered later. Disruptive technology is a new low/no-cost solution that replaces or enhances a technology already in use. This provides the greatest source of opportunity. Pervasive technology is technology that is easy or common enough that we introduce it but do not support or create for it. Generally speaking, technology that we consider pervasive is disruptive to others (e.g., collaborating in real time using a Google Doc).

Administratively, we created four broad teams within the Emerging Technologies unit to cover most of the technology we encounter: the story, design, development, and hardware teams. The story team is responsible for videos, podcasts, and other types of media, but these team members also bring important perspective to character design and gamification. Their skills have been indispensable with regard to MOOCs and other types of online learning. The design team is responsible for the “look and feel” of everything that comes out of the unit—for example, traditional designs such as posters, modern responsive websites, complex visualizations, and/or cutting-edge interfaces. The development team makes things work. Currently, this team’s activity consists mostly of apps but also includes backend development as well as integration issues with new software. The hardware team is responsible for physical objects. Although much of this team’s focus is on hardware such as servers and RAIDs, recent efforts include the makerspace with low-cost 3D printing and large-size multi-touch screens. Through these four teams, the Emerging Technology unit supports the wide range of institutional needs, including grants, special classes, and immersive learning projects. We have even been hired by agencies outside academia for project work and for innovative administrative ideas.
The Emerging Technologies unit strives to raise awareness of new technologies as well as to prepare for the administrative challenges of adopting such technologies. We are a support unit, not a research or academic unit. Our objective is to bring technology as a solution to the many challenges facing the academy. By incorporating students and staff in each team, we offer cost-effective and practical solutions.

Key to the structure of the unit is that it is designed to constantly roll forward. Academic institutions have a core expectation that learning is ongoing. However, the traditional structures—from the semester schedule to accreditation—hinder disrupting the old and replacing with the new until the new is proven to be effective. The Emerging Technologies unit, housed in the IT organization outside the traditional structures, focuses on gaining awareness and knowledge of disruptive innovations before they arrive in the classroom. This allows us to properly advise, manage, and react to the disruption. When possible, we can be proactive and even defend the higher education space. (Numerous companies outside of academia exist to augment and even replace the higher education experience. These entities, both startups and established, believe that they can do a better job than those of us in higher education.)

More strategically, the role of the Media Development side of the unit is to provide our institution with enough talent and production capacity to allow faculty and administrators to innovate and to create artifacts that take advantage of the constantly evolving distribution paradigms. By creating an external company (i.e., Frog Baby Apps LLC) to handle the app distribution process (and other media such as iBooks) for the institution, the unit facilitates faculty in getting their media products built and distributed to the world.

To be clear, we do avoid several areas. For example, the unit does not evaluate medical or industrial technologies. Those are better left to the respective academic departments, and they rarely move as rapidly. In addition, we have no interest in exploring sensitive data such as payment systems, academic systems, or other personnel information. Undoubtedly, there will be new and ongoing challenges as the quantified self blurs the line between public and private information.

A main side effect of the Emerging Technologies unit is the positive impact on the student employees of the Digital Corps. Our rigorous intake program, based on industry-standard media and technology certifications, provides the diverse students with a common language and experience. Digital Corps students are taught professional soft skills, and they complete team-building exercises, creating a cohesive experience that prepares students for the professional world. In the first five years of the Digital Corps, more than 80 percent of the students were employed in their field of first choice within five months of graduating.

Although I put forward this model as one for other institutions to tinker with, improve on, and eventually disrupt, I acknowledge how challenging the pressure of constant disruption can be, as well as how innocently it can take place. Graduates entering the job market are feeling this on a daily basis. In my own personal projects, I can’t help but notice how few people I need to help me reach a global audience, and I wonder who and what I may be unintentionally disrupting.

While we all wait for a predominant administrative paradigm to disrupt our current structures, perhaps the best advice for managing constant change is to have more patience.

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By JONATHAN BLAKE HUER

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