The Top 10 IT Issues and the Future of Learning Logistics

I love top 10 lists. Really, top any-number-of-items lists are great. Information is so hard to quantify in a meaningful way, but listsicles (the technical term for these lists) always seem to do the trick. There is something reassuring about knowing in advance how many “somethings” I’m about to learn and about realizing that any boredom caused by any one item can be quickly relieved by the next item on the list. And I’m always suckered by the clickbait links that proclaim: “You’re not going to believe #4!”

The EDUCAUSE Top 10 IT Issues list is no exception. This list tells an interesting story that reflects the collective concerns of the higher education IT community. However, the 2018 list tells this story differently. For me, the story is not about what’s on the list but, rather, what’s not. Learning technology (in various phrasings) has been a recurring item on the EDUCAUSE Top 10 IT Issues lists every year since 2000 except for two: 2012 and 2018. Does the fact that supporting teaching and learning didn’t crack the top 10 suggest something about higher education information technology? Possibly not. It’s important to recognize that we have hit a saturation point where teaching and learning has reached such a level of strategic importance that putting it on a list of things to worry about seems to somehow downplay its importance—as if it is simply one more to-do item on the IT grocery list of issues. “Let’s put transforming learning on the list—right below milk, eggs, and bread.”

In other words, how do we talk about IT issues involving teaching and learning when teaching and learning is at the heart of every IT issue?

For generations, the basic structure of higher education has been divided into courses—each a combination of faculty, students, classrooms, and textbooks. This combination is replicated as an independent transaction with students thousands of times, with a rinsing-and-repeating between semesters. In recent decades, information technology has helped make this process more efficient through technical infrastructure.

Changing expectations from students, new learning modalities, and emerging technologies now challenge this fundamental combination. These intersecting forces create a new opportunity to reframe IT efforts and use the institution’s diversity and scale as an asset—something I like to describe as learning logistics.

Learning logistics is about developing an intelligence used to design the best possible, always-on student experience. It isn’t about a generalizable one-size-fits-all approach to education. Rather, learning logistics is based on a smart foundation that supports our best teachers and empowers creativity in our students. When looking at this year’s Top 10 IT Issues, we can see the leading indications of how learning logistics is changing culture, policy, and understanding on campus.

Among the most obvious examples of learning logistics is the use of data to help students be successful (Issue #2: Student Success). Analytics has been a long-discussed innovation within higher education; however, it still has far to go. Using data to help predict student success so that we can intervene with struggling students often consumes conversations about analytics. While essential, using data to empower learning isn’t just about students who struggle. By taking advantage of the ambient data that resides with increasingly complex and intertwined online technologies (Issue #8, tie: Digital Integrations), we can lift all students—especially by raising ceilings for those who may be disengaged but capable of doing more.

The trend toward effectively using data to enable student success also leads us to use data to explore learning design. Artificial intelligence (AI) and machine learning are topics of emerging importance. Nearly everyone comes into contact with AI and machine learning technologies on a daily basis, ranging from the way that Netflix uses our TV-watching habits to provide recommendations to the sometimes comedic auto-corrections our smartphones make while sending text messages. The technologies that make these interactions possible can also be used to take on some of the greatest challenges facing the development of open educational resources.

Taking advantage of the increasingly integrated learning management, content, and assessment environment makes it possible to develop tools for reducing the time and effort needed to develop content. Leveraging machine learning technologies that can discover relevant content, construct textbook alternatives, and craft effective assessments is clearly on the horizon of learning technologies that can reduce the cost of attendance for students (Issue #6: Higher Education Affordability).

In addition, we can’t discuss the student experience without exploring space. Many classrooms are still designed largely to
solve the same scarcity problem present in a one-room schoolhouse—that is, to match the number of students to the number of seats. This is an institutionally-focused view of a complex numbers problem. With thousands of courses and thousands of students, how do we make it all fit?

Again, thinking about the scale and diversity of the institution, we can reframe the thinking about classrooms as well. We can do so by transitioning into a mode where “fit” doesn’t mean the right number of seats but, instead, the best possible space for the intended learning outcome. Looking across higher education, we can already see great examples of this shift. Makerspaces are an increasingly popular innovation on many campuses. We can also see examples of immersive experience labs and design studios that attract students from a wide variety of disciplines. In these cases, spaces were designed to engage students in very specific experiences (Issue #5: Student-centered Institution). Our opportunity is to expand this thinking to include an even more diverse collection of activities, ranging from performance art to escape rooms. We can challenge the traditional assumptions that we make about classrooms: Why are classes held in the same place, with the same group of students, with the same instructor?

Data analytics, machine learning, and learning spaces are just a few examples of how learning logistics has become so infused into information technology that it’s impossible to tease the technology apart from anything else that we do. This is an important advancement for sure, but what’s more important is that we realize this shift has happened—that we don’t become so fixated on technology that we lose our focus on the mission. Rather, we need to use technology to expand great experiences without killing the magic that made it possible in the first place.

Kyle Bowen (kdh23@psu.edu) is Director of Education Technology Services at The Pennsylvania State University.

© 2018 Kyle Bowen. The text of this work is licensed under a Creative Commons Attribution-4.0 International License.