As we look ahead to 2019, it is imperative that higher education leaders think strategically about the unfolding future of technology.

We are just starting to grapple with the macro effects of emerging technology on the global economy. Innovations in 3D printing, mobile devices, and social media are rapidly changing workplaces, supply chains, jobs, and ultimately cultural values. The potential impact of automation (both in hardware and software forms like AI) looms even larger, with some futurists predicting a new industrial revolution and others forecasting mass under- and unemployment. However, while we can offer predictions based on past examples of major technological and societal evolutions, the actual outcomes of these developments are still unclear, which is one reason why higher education must pounce on the issues. Our scholars across the disciplines can beneficially contribute to public debate and policy development concerning the effects of new technologies, from privacy issues to psychological changes to how code works and how we use it to mobilize politically. Additionally, because part of the responsibility of American postsecondary education is to prepare students for a lifetime in the labor force, we have to carefully rethink our curriculum and service offerings for a future unlikely to resemble the present in most ways.
**Editor’s Note**

**Navigating Technology and Innovation in Higher Education**

By Caitlin Salins, Executive Project Manager, Bringing Theory to Practice

In this issue of our newsletter, we delve into a complex and expansive theme: technology and innovation. As our readers know, BTtoP is foregrounded in a commitment to holistic, transformative, and meaningful education—learning designed to foster student well-being, civic engagement, and career preparation. None of these elements happen in a vacuum; in order for education to be meaningful, it has to acknowledge and reflect emerging trends and disruptions. Technology is advancing exponentially, with both positive and negative implications—the potential to (1) give voice to the voiceless, but also to sustain or exacerbate systems of oppression; (2) offer open educational resources and MOOCs or to devalue human relationships and the traditional educational structure; or (3) to reshape the power players in higher education and beyond, for better or for worse. A more tangible result of the fast pace of technological advancements, in combination with stagnating educational attainment rates, is that our country is faced with a looming skills gap based on tech skills, which economists warn is growing faster than at any time in our history.\(^1\) If, as we at BTtoP believe, part of the mission of higher education is to serve the public good, colleges and universities have a responsibility to combat this for the better of our entire nation. Yet, foundational to BTtoP’s origin is the idea that campuses are not only a proving ground for job skills—we also want students to be able to take the technological knowledge of the future and examine it critically to understand how it relates to their sense of agency and self-worth, their social justice efforts, their democratic participation, and their connection to their community.

“We want students to be able to take the technological knowledge of the future and examine it critically to understand how it relates to their sense of agency and self-worth, their social justice efforts, their democratic participation, and their connection to their community.”


(2) Karen J. Head, *Disrupt This! MOOCs and the Promises of Technology* (Lebanon, NH: University Press of New England, 2017).

"Data analytics, implemented well, can offer new ways to support students, an especially important theme as more first-generation and other traditionally underserved student populations grow and debt anxieties soar. On the downside, big data also has the potential to cause major privacy concerns."

Moreover, emerging technologies and practices are felt within our institutions in complex ways. IT already constitutes a significant force on campuses. Faculty and students are consumers of the vibrant app world. New devices (especially mobile ones) and their network demands proliferate. Sometimes, they are useful tools for learning and other times, distractors. Now we are realizing new possibilities. Data analytics, implemented well, can offer new ways to support students, an especially important theme as more first-generation and other traditionally underserved student populations grow and debt anxieties soar. On the downside, big data also has the potential to cause major privacy concerns.

Tutoring services may assist both faculty and students in the learning process, but also risk decentralizing the value of human to human relationships. We cannot discuss emerging innovations without considering the corporations that fund them and how their missions in some ways overlap with—and are also quite distinct from—the goals of colleges and universities. Finally, the ways in which these technologies are supported and deployed look very different across the educational landscape, depending on the resources and mission of institutions and their silos.

These issues, both on the macro scale and the campus scale, are already being discussed across American higher education. However, they deserve promotion to the strategic level, since the issues are so interdisciplinary and cross administrative boundaries. They ultimately involve critically rethinking the structure and purpose of higher education so that both are not only concerned with the challenges, opportunities, and learners of today—but also of tomorrow.
Campus Highlight

Ignatian Pedagogy and Learning Technologies

By Eddie Maloney, Executive Director, and Maggie Debelius, Director of Faculty Initiatives—both of the Center for New Designs in Learning and Scholarship, Georgetown University

If anything has changed in teaching and learning in the past twenty years, it’s the overwhelming integration, influence, and adoption of digital technologies. While certainly not the first technologies to change how we teach and learn, digital technologies from learning management systems to social media, blogs, and wikis have had a profound impact on how teachers and students interact with course materials. They have enabled new ways of gaining access to information, teaching at a distance, and shifting the learning experience from a teacher-centered, lecture-based model to a learner-centered, “flipped” classroom. Much of the work we do in the Center for New Designs in Learning and Scholarship (CNDLS) at Georgetown University seeks to understand how digital technologies can inform and enhance not only student learning but also the totality of a student’s life while at the university. We have found that the thoughtful use of technology can help Georgetown, a Jesuit institution, enact its commitment to Ignatian pedagogy, which seeks to educate the whole person and care for each individual, respecting unique gifts and insights.

While Ignatian pedagogy has a long and storied tradition, it is in many respects as relevant today as it was in 1599, when the principles of Ignation pedagogy, the Ratio Studiorum, were first published, and it offers lessons adaptable beyond just Jesuit institutions. Its principles are powerful approaches to learning that align with what research shows are the most impactful ways to use technology in the classroom. At its most basic, Ignatian pedagogy consists of the continual interplay of context, experience, reflection, action, and evaluation. Each of these elements foregrounds an approach to learning that asks the learner to take action for their learning, to be critically reflective, and to enact learning in ways that build on experience and discernment. In fact, it’s arguable that the uses of technology that have the greatest effect on student learning are the ones that engage with one or more of the elements of Ignatian pedagogy in some way.

This assertion comes on the heels of a growing body of research that suggests that digital technologies can have a positive impact on holistic student learning. Many of these benefits come not from the technologies themselves but from the ways they are used. That said, the best educational technologies are ones that by design lend themselves to particular uses that encourage different kinds of learning and new ways of engaging with students. For example, because of their intrinsic design, blog technologies can be used thoughtfully to have a deep and meaningful impact on student learning. Because they allow each student the opportunity for self-authorship, they can be used to encourage creative expression, critical reflection, and a classroom atmosphere of cocreation. When navigating to a blog site, typically the first visual item is a student post, foregrounding and centering the student context and voice. By allowing multiple visible posts per author and making the entirety of their learning engagement transparent to students, blogs enable both faculty and students to see learning as a process rather than a product—a collection representative of their growth. The final product of a course blog is a narrative of learning that can be part of students’ evaluation of their progress in their thinking, and they can return to it when considering decisions about future work.

In contrast, while course management systems (CMS), also called learning management systems, can certainly be used to engage in meaningful learning experiences with students, the tools themselves tend to foreground manage-
ment over learning. The first thing students see when they enter a CMS is usually a course-level announcement or administrative function. Unlike the critical reflection space of a blog post, wherein students can modify format, apply tags, and include other digital media, a CMS typically offers a discussion-based forum, often leading to surface-level dialogue. Unlike the iteration inherent to a collection of blog posts, a CMS tends to be used as a place to submit final products of learning, which are sent off to the professor for evaluation.

Within CNDL's Learning, Design, and Technology program, we try to pedagogically balance this tension between technology that is merely available and technology that is actually meaningful for learning in our own classes. In LDES 502: Technology and Innovation by Design, for example, instead of using Canvas (Georgetown's designated CMS), students write weekly critical reflections in a WordPress blog, where they can express themselves in a medium designed for creative communication—utilizing media like images, videos, gifs, tags, and word clouds. Students can comment on their classmates' posts, and resources are co-created and transparently shared. The final reflection assignment asks them to examine the development of their own posts throughout the semester, cite lessons learned, and mention a fellow classmate's post that inspired their own thinking. This technology serves both to speak to Ignatian values and allow our students to become more digitally literate with tools that will likely only increase in importance in their career field and world at large as technology advances. This is our approach when considering the adoption of new technologies—that combining well-designed digital tools with pedagogical models leads to the most effective uses of these tools, and also to the most impactful teaching and learning environment. Ignatian pedagogy can serve as one approach to thinking about how to utilize technologies for deep student engagement.

**STUDENT PERSPECTIVES**

*Editor's note: In this issue, we want to explore with our community the complex ways technological innovations influence the entire higher education enterprise, including the student experience. While our Campus Highlight typically offers an on-the-ground perspective from a campus faculty member or former BTtoP grantee, in this issue we wanted to lift up the student voice directly. We invited two Georgetown students playing dual roles in the classroom to explore how the applied technology on campus affects their learning and sense of self.*

**Space to Play: Digitally Hybrid and Flexible Learning Spaces**

*Randal Ellsworth, Student, Masters of Learning, Design, and Technology, and Instructional Technologist, Center for New Designs in Learning and Scholarship, Georgetown University*

I've come to believe that learning space design, like learning itself, needs to be a playful and iterative experience. Whether you are designing a room or inhabiting it, giving yourself some room for playful iteration can go a long way for learning how to best encourage learning.

Carbarn 315 is a Georgetown University classroom that facilitates learning activities for a mix of students and instructors who are concurrently and flexibly located either physically in the space or remotely online. All of Georgetown's Masters in Learning, Design, and Technology courses are held in this room. As both a student in this program and a full-time staff member for the institution, I help implement a vision for this space that

(continued on page 6)
empowers faculty and students to experiment within this hybrid and flexible model of blended learning. Just like me, the room also plays double duty working with designers and technologists by day, and faculty/students by night. It’s there for us to experiment, collaborate, and explore new approaches to teaching and learning.

Shaping the room as both a student and staff member has been messy, revelatory, and fun. Experiencing the inevitable tech hiccups myself in the classroom gives me a unique stakeholder experience, as I can groan alongside other students and feel a sense of urgency and attachment. Doing this playfully is only made possible by a cyclical approach that lets us learn together from mistakes in order to take progressive steps forward. Our early low-stakes experimental interventions inform action and subsequent intervention through successive iterations. I shudder to think how this would have played out had the program poured a significant financial investment into a complete design from the get-go. I also hesitate to think we would have gained as much from our classes, both the in-person and online participants, if we weren’t all willing to grin and work through missteps with the technology along the way.

One of our students, Anel Albertao, has been a tremendous partner in helping us to play with the space. Unlike the rest of our students, who are only occasionally remote, she attends class online regularly (with the rest of the class in-person), having moved to California during the application process. At the beginning of the fall 2018 semester, a lot of our ideas for synchronously bridging the physical and the digital were all theoretical—but having “meeting owl”) to begin our thought process.

While our goal is to invest heavily into making this experience as “turn-key” as possible, we have learned that it really doesn’t take too much to blend workable classroom activities and discussion. Technologies for audio, video, and web-based environments have progressed to the point where a range of approaches are possible with varying degrees of investment. In my experience, the main key for successfully finding an approach that works is a willing heart and mind, and the time and space to think through these approaches for learning and design in a particular space or in a particular class session.

Designing (or adapting) a space for faculty and students to experiment with new approaches to teaching and learning is an invitation for them to play—a liminal space that is approachable, exciting, and often messy. As Calvin once remarked to Hobbes after a full day in Bill Watterson’s classic comic strip, “I say, if your knees aren’t green by the end of the day, you ought to seriously re-examine your life.” I’m hopeful that my knees will still be green long after graduation as a student. I can’t wait to uncover what’s around the corner for blending digital and online spaces, whether in our classes or when reading about yours.

Hybrid Learning Path to Success
Anel P. Albertao, Student, Masters of Learning, Design, and Technology, Georgetown University

What is the future of learning? There is no one answer. However, when you examine the changing demographics of
the university student (see fig. 1), one must take a serious look at how learning is allowed to flourish.

I am a hybrid student, meaning I attend classes in the Masters of Learning, Design, and Technology program both remotely from where I live in Silicon Valley and physically at Georgetown’s campus in Washington, DC. When I join remotely, I attend classes via the virtual chat program Zoom in real time. Thus far, I’ve joined classes physically on campus three times during the fall 2018 semester, for about five- to ten-day increments. This combination of remote and present learning is a new experience for me—but one that has been professionally and academically “up skilling.” I enjoy this type of learning process because it bridges the now of work and the future of continuous learning.

Through this hybrid method, I have learned design thinking processes and critically discussed important issues such as the wage gap and the future of higher education. I have both taken a class on technology and innovation in learning and experienced the benefits and challenges of these topics firsthand. In addition, I have enjoyed exploring, with my classmates, ways to remotely collaborate, stay in communication, and learn from each other’s diverse backgrounds and experiences.

As a student, many times you study in a program that does not truly prepare you for the complexity of navigating both work and life—you feel as though you are in a bubble—but as a hybrid student, I merge my worlds. For example, I have attended conferences and participated in engaged learning where I applied lessons from our course readings, discussions, and projects to further develop my skills and understanding of what it means to be an instructional designer, thus developing my professional framework. But at the same time, I am still able to be at home with my son, husband, and mother in California, where I navigate the everyday challenges of home life and find ways to balance professional demands with the family life I want.

The most rewarding aspect of this hybrid virtual learning experience is that I am provided the freedom to learn beyond the higher education campus. The autonomy to come to campus and reconvene with my classmates, professors, and advisor fits my personal learning style and work style. It is not a micromanaged process that is bogged down with bureaucracy or outdated practices, but instead, an iterative and truly cocreated learning environment where my student voice and professional needs are taken into account. All of this is done within the goal of learning, designing, and understanding the potential of technology via the rigor of a Georgetown University education.

The opportunity to explore this program through hybrid learning has shaped me professionally and personally. I have decided to focus my studies on instructional design for higher education because I now know firsthand that when learning, design, and technology are used purposefully, students can flourish holistically. As a first-generation Latina college graduate who was formerly undocumented, I understand the power of education; it is freeing. Thus, as my favorite author, Toni Morrison, has said, “When you get these jobs that you have been so brilliantly trained for, just remember that your real job is that if you are free, you need to free somebody else.”

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A few years ago, as dean at The New School, I started a fellowship program for adult undergraduates. The Fellows took a design seminar with me, focused on innovating our bachelor’s program to meet the needs of nontraditional students, and they served as peer leaders in implementing their ideas. It was a remarkable teaching experience.

One of those Fellows, whom I’ll call Andy, was an online student in the Midwest. He identified as disabled; he attended the seminar by Skype and communicated by text, with a cartoon avatar as his thumbnail. It took Andy about a week to cure me of the well-meaning condescension that had me worried about “onboarding” a disabled student whose voice and face I couldn’t directly experience. He was warm, funny, smart, and utterly present. He used text deftly to contribute to the discussion. He was a skilled collaborator, writer, and media maker. And over the course of the year, he offered me an informal tutorial in online pedagogy and assistive technology: sending an upgrade to the classroom mic, for instance, or suggesting that we launch Skype early each week so that onsite and online students might socialize informally. I learned much from him.

But what was the lesson? It’s tempting to see this story as proof of the enabling power of new technologies, a tale of digital innovation enlarging our capacity for inclusive teaching and learning. Yet I’d suggest the opposite. This is a story of personal agency and shared values enabling the inclusiveness of technology. Educational purpose drove technical practice, not the other way around.

If we’ve gleaned anything from this era of technological change, it is that innovation yields radically contradictory possibilities. The same set of tools and practices that assisted Andy (and through him, the whole seminar)—digital networks, platforms for multimedia collaboration, the use of avatars and constructed identities—has also enabled the epidemic of harassment and trolling in online public culture. The same data-monitoring apps that point advisors toward languishing students can be used to “nudge” those students to set workforce needs ahead of their own aspirations. Innovations always underdetermine the uses to which they can be put. So the key question, for me, isn’t how emerging technologies will reshape higher education. It’s how our values and goals ought to shape our embrace of the new. Innovation opens up myriad pathways. The compass we bring helps to guide the routes we take.

Andy’s story underscores some of the core values and goals with which I’d aim to engage technological innovation. And not coincidentally, the values and goals of Bringing Theory to Practice offer much the same answer. We ought to privilege tools and technical practices that work to empower students (most of all those at risk of being marginalized).
or silenced); to thicken relationships among students, teachers, and mentors; to foster community and collaboration, connecting students across barriers of time, space, and social difference; and to integrate students’ learning with the whole of their emotional, family, com-

“So the key question, for me, isn’t how emerging technologies will reshape higher education. It’s how our values and goals ought to shape our embrace of the new. Innovation opens up myriad pathways. The compass we bring helps to guide the routes we take.”

munity, and work lives. Conversely, we ought to resist (or at least skeptically inspect) innovations that work to attenuate students’ relationships with teachers and peers, to reinforce inequalities of access and voice, to silo and accelerate training in isolation from reflective learning, or to subordinate student aspirations to the needs and efficiencies of others (whether academic institutions, the government, or employers). These guidelines seem to me as salient for the health-tech student in a community-college simulation lab as for the history major researching her senior thesis online.

It’s clear, I suppose, why Andy’s story seems so exemplary to me: he used new technologies to make an innovative peer-leadership program even more inclusive and creative. Nor will it be surprising that I’m drawn to competency-based curricula that deepen teacher-student consultation—but am dead set against direct assessment programs that validate competencies based on teacherless exercises. Or that I’m deeply worried about the use of data analytics to algorithmically classify which degrees a student is “ready” to pursue—thereby reproducing social inequities of access. Or that I fear the isolationism of much online learning, the kind that gets canonized in advertising imagery of the solitary parent before her computer screen, late at night in the kitchen.

You may disagree with these particular value judgments, but it is imperative that educators make them. We are living through a Copernican moment of turmoil, risk, and creative flux, a moment in which it can be difficult to distinguish between a guiding light and a shiny object. It will take time, exploration, and ongoing conversation to discern which paths will advance the needs of students and the purposes of higher education, and which will stymie them. In the meantime, I think, the old Facebook maxim—“move fast and break things”—had it wrong. Let’s move forward, compass in hand, and make things.
In Brief: BTtoP News and Notes

NEWS

Thank You for Joining Us at AAC&U’s Annual Meeting

We would like to thank those of you who attended our three fishbowl sessions at the annual meeting of the Association of American Colleges and Universities (AAC&U) in Atlanta! Our sessions examined the following themes: student well-being and the equity imperative, work and the purposes of college, and building the community of change: an open call to envision the future of Bringing Theory to Practice (and higher education). Each session was grounded in an audience-wide participatory model which facilitated rich dialogue, debate, and interventions as well as a sense of community ownership in forging BTtoP’s future. We’re also grateful for all who were able to join our annual reception—we look forward each year to the opportunity to meet new colleagues and be with old friends.

BTtoP to Hold Well-Being and the Equity Imperative Workshop at AAC&U’S Diversity, Equity, and Student Success Conference

In March 2019, BTtoP will host a pre-conference workshop at AAC&U’s Diversity, Equity, and Student Success Conference in Pittsburgh. Facilitated by Joselyn Schulz Lewis, Timothy K. Eatman, and Caitlin Salins, the workshop will address two questions: What does it mean to place support for student flourishing at the center of the equity agenda, and what does it mean to place equity, diversity, and inclusion at the heart of our understanding of student well-being? It will focus on the experience and needs of students whose experience of marginality often undermines their success: students of color, first-generation students, low-income students, and working-adult students. It will combine research on student well-being and precarity, discussion of best practices, and reflection on what general commitments constitute a “well-being equity agenda.” To learn more about the workshop, visit https://www.bttop.org/news-events/events/2019-diversity-equity-and-student-success-conference-engaged-inclusivity.

Bring Your Voice

As part of our emphasis on community building and collaborative meaning-making, every two weeks BTtoP sends out an informal email update titled Bringing It. We hope Bringing It can be a platform for the whole BTtoP community: a place to respond, share work, share thoughts and readings, brainstorm, argue, and build connections. If you have an idea for a brief post, give us a heads-up about what you’d like to write. If you would like to contribute to “What We’re Reading,” please send us a comment (no more than 100 words, please!). If you have an idea for a project, give us a kind of intellectual help-wanted ad. Or just send us advice, critiques, and kudos. You can reach us at info@bttop.org. We welcome your voices.

Collaboratories

BTtoP is in the process of establishing collaboratories: projects pursued by a group of institutions, working collectively to brainstorm, develop, test, and disseminate practices that advance the educational purposes to which BTtoP is committed. While each collaboratory’s duration and scale will vary, they will typically span two academic years and comprise eight to fifteen institutions from diverse sectors. Each partner institution will work on the project theme in ways specific and beneficial to its campus, but the larger purpose of the projects is collective innovation and systemic change. We currently have three collaboratory proposals, with one (our well-being and equity imperative) already in motion. Additional proposed ideas include a collaboratory on educating the whole adult student and civic engagement across polarized communities.

BTtoP Releases RFP for New Multi-Institutional Innovation Grants

Last December, BTtoP announced a new funding opportunity for colleges, universities, and other higher education organizations: multi-institutional innovation grants with awards of up to $7,000. These grants will fund multi-institutional collaborations using innovative practices, programs, policies, or research to advance the core educational purposes of BTtoP while adhering to BTtoP’s commitment to educating the whole student, equity and

(continued on page 11)
BTtoP Releases RFP for “AMP” Grants of up to $3,000

In mid-February, BTtoP announced a call for proposals for our newest funding opportunity: Amplifying, Disseminating, and Increasing the Public Reach of Research and Practice (AMP) Grants. Intended for both public and non-profit universities, colleges, and consortia, AMP grants will provide between $500 and $3,000 to increase the public reach of work previously supported by BTtoP. These grants may be used to support a range of activities, including campus-to-campus consulting visits, multi-campus convenings, public writing, and the release of digital and media products. Proposals will be accepted on a rolling basis starting March 1, 2018, with award announcements beginning on April 1, 2018. Once released, the RFP will be available on BTtoP’s Funding Opportunities page at: https://www.bttop.org/grants-funding/funding-opportunities.

TRAVELS

BTtoP Director Speaks at University of Michigan

On December 6–7, David Scobey visited University of Michigan, Ann Arbor as part of its Academic Innovation Speaker Series. He lectured on “Current Crises, Creative Currents, Guiding Purposes: Notes For Navigating the Storms and Shoals of Higher Education,” as well as consulting on various university initiatives focused on undergraduate innovation and community engagement.

BTtoP Director to Deliver Keynote at Public and Global Health Summit

BTtoP Director David Scobey has been invited to be a plenary speaker at the 2019 Undergraduate Public Health and Global Health Education Summit sponsored by the Association of Schools and Programs of Public Health (ASPPH) on Wednesday, March 20, 2019, in Arlington, Virginia. The summit, a one-day annual event “to advance leadership, excellence, and collaboration in academic public health,” will be attended by approximately two hundred higher education faculty, staff, and administrators within the public and global health field.
The Bringing Theory to Practice Project (BTtoP) is an independent national effort. It is funded by The Endeavor Foundation and functions in partnership with the Association of American Colleges and Universities (AAC&U) in Washington, DC.

The Endeavor Foundation is dedicated to efforts that foster independent thought, ethical understanding, deep appreciation of the arts, and reverence for the natural world. The Endeavor Foundation supports and catalyzes excellence in liberal arts education and related fields, and has supported the curricular and pedagogical development of a significant number of liberal arts colleges in the United States.