Sociologists specialize in context. We like to describe things, and sometimes we like to predict things. We’ve done both in the area of education technology (“edtech”). The British sociologist Neil Selwyn first proposed the idea of a sociology of education and technology, and he has been focusing on this issue for at least twenty years. Yet in a more recent book chapter, Selwyn and his colleagues noted that most of the research and writing on education technology is somewhat limited in its scope and in its ambition. I would put a finer point on that claim. Almost all of the academic research and writing about how we should use technology in our higher education institutions, about how technology is changing our institutions, and about how technology can and cannot transform learning opportunities for various groups of students has been limited in its scope and in its ambition. Some of those limitations exist for very good reasons. For example, data is very hard to come by. Researchers also are concerned with this thing called ethics. The commitment to ethical research delimits randomized trials and open data for fear of harming subjects or compromising their privacy. Additionally, analysis of what works and what does not work in education technology requires specialized skills, which are not always available.

Even with these limitations, I believe now is an ideal time for us to start to rethink the context of edtech. In the long arch of education technologies, we have moved from mail order as technology to televisions in classrooms as technology to the internet as technology. We have gone through bust-and-boom cycles: from “this will change everything we do” to “this changes nothing” to “this changes everything!” My hope is that as a result, we have calmed the flames of the moral panic about what edtech can and cannot do. We can now put that behind us and expand our scope and our ambition. The sociology of edtech can call us from our academic tracks and our learning centers—from our respective silos—and join us as a community of practice to think about the messy, multidimensional whole.
The Current Context

Learning technologies do not exist in a vacuum. For one thing, education technology is often restricted by how much money is available at the time of purchase. Edtech is also defined by the person making the decision to purchase it. Plus it is restructured and redefined first by the instructors who use it in their teaching and then by the students who use it in their learning. Many of these tools are implemented in ways that are dramatically different from what was originally intended in their design.

Martin Weller, a professor of educational technology at the Open University and someone who has been deeply involved in thinking and writing about edtech over the last two decades, talks about how we have a host of research on what might be called “edtech 2.0.” This research peels back the curtain on our thinking about things like platforms, learning management systems, clickers (so many clickers!), blockchains, badges, biometrics—and the list goes on. Hopefully we now know a little, or a lot, about the assumptions built into edtech 2.0 tools. These include, for example, assumptions about ability (an area that we don’t talk about nearly as much as I wish we did) and about language and about social norms related to privacy and surveillance. Regarding the last, should students own their data, and if so, what would that look like? What can and should we do with that data? Should we turn our students’ data over to external vendors? What implications would that have on students’ ability to control their own relationships in a digitally mediated society?

One way I like to conceptualize this edtech 2.0 work by Weller (and others) is that edtech 1.0 was about looking at the shiny stuff. Edtech 2.0 is about discovering what we can do with that shiny stuff. We can even look forward to edtech 3.0, which will be about determining what we should do with that shiny stuff. This leads to the question, in considerations of what we should be doing, who is the “we”? What resources, power, and legitimacy do “we” have to do what should be done? When we think about what we should do as opposed to what we can do, we get into questions about ethics, fairness, and justice and their intersection with learning technologies. And here I’m using the term learning technologies broadly, to include any tool, either analog or digital, intended to facilitate learning and development. If these tools are going to survive into the phase of what we should do with education technology, I believe they must be embedded in the everyday practice of the higher education institution.

Doing so is problematic, however, because learning technologies have emerged as bureaucratic units that are distinct from academic units. Yet academic units remain the central way that institutions of higher education are organized, if for no other reason than that these units are the primary way that students interact with the institution. For the majority of students in traditional not-for-profit higher education, the college is an academic
unit. It is their major, minor, track, and specialization; it is what will be printed on their degree; it’s their professors and their advisors. So our learning technologies cannot continue to live solely in our administrative units; our academic units are where we are doing some of the more transformative work of learning. The sociology of education is helpful here.

Over the past sixty years of the sociology of education, we have learned that teaching students how to do something is rather straightforward, but also very difficult. We call this skill development. We know how to do this. We fundamentally know what works. The harder part is not just developing a skill but developing what we might call social capital and cultural capital. It is teaching students the language of the community of people who use that skill—the social norms and the beliefs of the profession that students will join when they too use that skill. This is the transformative part of education. And this is the real challenge for edtech 3.0.

Here is the problem: the devil is always in the details. The typical college student in the United States is not attending an elite private institution. The typical college student is not eighteen or nineteen years old. The typical college student today is a woman and/or a person of color. In addition, students are increasingly coming from backgrounds in which they are living with the cumulative disadvantage of inequalities in K-12 education and inequalities in how they fund their education.

On the institution side, this typical college student is more likely to be taught by non-tenure-track faculty members than are less typical students (i.e., wealthier, white, enrolled in selective colleges). In addition, various institutions have varying levels of resources to serve their students. Edtech at a community college looks quite different from edtech at a state public university, which is very different from edtech at a well-funded state flagship, which can look even more dramatically different from edtech at a private school.

All of this influences the decisions we have to make about how education technology will be deployed in the modern college/university, in the classroom, and beyond. And this is where things get complicated—in the mess, in the nuance, and in the context. I believe we need to rethink the context of edtech. We need to marry the best of our academic work with the best of edtech. In other words, what would it look like if education technology were embedded in the everyday practice of academic disciplines?

**Digital Sociology @ VCU**

That question has been a guiding one for us at Virginia Commonwealth University (VCU) as we continue to develop a process to do precisely that with our online digital sociology program, which offers a two-year master’s of science degree in sociology with a concentration in digital sociology.

We had this wonderful idea in 2015. We decided we would sit down and rewrite the curriculum for the online program. I had just finished my book *Lower Ed,* and consequently I had one impetus: I wanted us to design a program that would take all of the failures I saw in the for-profit higher education sector and flip them on their head. This sector had been really good at using technologies
It doesn’t matter whether or not a tool can do something; it matters whether or not students can make sense of what the tool is doing.
to transform enrollment but really bad at using them to transform learning. Our partner in this effort was the VCU Academic Learning Transformation (ALT) Lab.

Administratively, the point of this program was to increase access for students who were being poorly served by the existing higher education institutions. In a state like Virginia, that meant reaching out to rural students and to military and veteran students. By virtue of doing that, we were very likely to attract women of color and adult or nontraditional students. And this is exactly what our first three classes of students in the Digital Sociology @ VCU program looked like.

We quickly realized that our core curriculum had to be entirely redesigned: we could not successfully offer asynchronous learning for diverse students in a tech-heavy learning environment without a whole lot of massive work upfront. We sorted through every available learning management system and through all of the open-access tools. We butted up against the numerous administrative and state regulations that allow us and disallow us to use one thing as opposed to another. We fought with content branding and marketing about what the website should look like.

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In this process, we found that we could not make any baseline assumptions about our students' ability to access, use, or make sense of edtech tools in their existing context. Across the United States, 97 percent of us have access to broadband. That number drops to 64–65 percent in rural areas, to 60 percent in poorer minority urban and suburban communities, and to about 58–59 percent in tribal communities. So we couldn’t make assumptions about broadband access. In addition, as surveys are showing, an increasing majority of students are using mobile devices for their academic work. So we also couldn’t make assumptions about laptop compatibility, for example. We thus used a lot of Google Classrooms to set up some of our early tools because we thought the framework would work with how students were probably using the internet in other parts of their life.

We were only about half right. In our first two cohorts, we found that students might know how to access Google but know nothing about how to use search terms to make Google work for them. When we assumed that our students could access databases, we discovered that some were able to click on them but didn’t necessarily understand the context of how to use the databases in their coursework. We toyed around with learning management systems that were supposed to offer one-click solutions, but we ran into the same problems. This highlights one of our findings from the sociology of edtech: it doesn’t matter whether or not a tool can do something; it matters whether or not students can make sense of what the tool is doing.

Here we were with what we were calling the first-born digital sociology curriculum. We were exploring digital sociology not just in our content but through the transformation of the entire learning process. We were collaborating with our faculty colleagues to co-teach courses, we were sitting in on each other’s online courses, we were implementing whatever tool was available to deliver the curriculum, and we were using constant feedback testing with students to see what was working for them. But when
we tried to break apart the algorithms of the various tools they were using, we were stymied by something very basic: our students didn’t know how to skillfully use a search function. And these were the students we were trying to embed in our edtech environment.

To respond to our students in that context, we faculty members had to give up a lot of academic control over our individual courses. We had to collaborate. We couldn’t become tool experts like our colleagues in the ALT Lab, and they couldn’t become sociologists, so we had to figure out how we could partner in meaningful ways. While we were trying to figure out how to use learning technology as practice, our colleagues in the ALT Lab were being asked to create, deliver, and measure educational technologies in order to help us build new tools, modify existing ones, and beta-test everything.

Our cooperation on the front end looked straightforward. A faculty member would sit down with a colleague in the ALT Lab for one or two sessions, come up with a gee-whiz online course module, and then deploy it. That was not the reality, however. To develop a meaningful online course, you have to know the content really well. And to use edtech tools in service to the content, you have to understand the tools really well. The academic faculty had power over how the courses were designed but didn’t have control of the tools; meanwhile the people who had control of the tools had no power over how the courses were designed. We had to find a way to work across these disciplinary silos, and we’re still working this out.

Another challenge that arose very early on in the process involved the should questions. Yes, I can record all of the keystrokes that my students take, but should I? Yes, we can use photos in our online forums, but should we? Yes, I can require my students to use an open-access platform that will mine their data and then market to them, but should I? Yes, we can force students to use a plagiarism software tool, but should we?

These are questions to answer and challenges to address if we’re going to make our edtech learning environments more just and if edtech 3.0 truly is about what we should do and how we should do it. Rachel Baker and her colleagues at the Stanford University Center for Education Policy Analysis (CEPA) are working on how we can study and understand online learning and the social and cultural context. According to their research, instructors are 94 percent more likely to respond to a discussion forum post by a white male than to one by any other student in the online learning environment.

Edtech tools that are supposed to increase access comes with the same sort of cumulative problems of advantage and disadvantage that we find in our face-to-face realities. The difference is that we have not thought as critically about how we’re supposed to use these tools to address and remediate those problems online. In fact, until recently we haven’t even had a good language for saying that we should be thinking about these things in our edtech spaces.

I believe that embedding edtech in academic disciplines can help. In working with our ALT Lab colleagues to build our digital sociology program, we realized that the academic discipline gave us a systematic way to think about whether or not we were reproducing offline realities in our online learning spaces. So we conducted audit studies of our courses. We applied mixed-method survey data to our online learning environments. But the sociology discipline does not have this market cornered. By embedding edtech in the humanities, for example, faculty could think about the historical context of where that technology comes from. Some of my colleagues in black studies and in gender studies look at whether or not these tools are embedded with logics about race and racism or gender and sexism. All of these aspects bring a necessary dimension to the way we think about edtech 3.0.

Moving Forward
If we know that we have reached the limits of what education technology can do (edtech 2.0), we now need to think about what education technology should do (edtech 3.0). I strongly believe we should be grounding edtech in the core of the disciplinary conversation, rather than leaving it at the periphery.
At VCU, this meant that we couldn’t create an online digital sociology degree without also revamping the sociology curriculum for all of our students. In reimagining how online learning would happen, we also rewrote how we were going to teach our face-to-face courses. As a result, our students now benefit from sharing courses, research projects, and databases and collaborating in the same way that they see faculty collaborating online and in face-to-face courses. We also had to decide, very early on, that we were committed to offering a degree that not only provided skill value but also transformed our students’ social capital and cultural capital. We are still learning at VCU, but we are confident that a sociology of edtech, this ethos of learning rather than prescription, is very healthy for our curriculum development.

The sociology of edtech has encouraged us to emerge from our areas of specialization and work together as a community of practice to reconsider the context of edtech. We must be sure that we do not confuse the technology tools themselves with the purpose of our work. Edtech is not a set of tools; rather, it is a set of practices that further a greater good. Our educational mission is not just to keep students enrolled or even to graduate students. Our larger mutual goal should be to use edtech to address inequalities in order to produce the most equitable educational processes that will enable our students to leave our institutions with better economic, social, and cultural opportunities than they had when they arrived. That, to me, is the potential of education technology.

Notes
3. See Martin Weller, The Ed Techie (blog), and Martin Weller, “Twenty Years of Edtech,” EDUCAUSE Review 53, no. 4 (July/August 2018).
4. See also, for example, the work of Stephen T. Kerr, Audrey Watters, George Siemens, and David Weinberger.

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