



TUESDAY, JULY 24, 2018

NEW AND INNOVATIVE MARKET OPPORTUNITIES

# Looking to 2040: Anticipating the Future of Higher Education

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*In April 2018, Georgia Tech's Office of the Provost released *Deliberate Innovation, Lifetime Education*, a report that explores the future of higher education. Using the year 2040 as a long-term vantage point, *Deliberate Innovation* makes recommendations on alternative educational models to reduce costs, improve the effectiveness of current methodologies, and increase opportunities to serve the needs of the next generation of learners. In this interview, Rich DeMillo, who co-chaired the Commission on Creating the Next in Education, discusses the future of higher education, and points to why institutions need to expand the scope of their strategic planning initiatives to meet the challenges of a rapidly changing industry.*

The EvoLLLution (Evo): Why is it important to envision a new future for higher education?

Rich DeMillo (RD): Typically, universities and colleges plan on a five- or ten-year basis, analyzing contemporary forces causing industry change to anticipate what the impact of those changes will be on the college ten years in the future. This allows us to make strategic investments to meet anticipated challenges.

The nature of students is changing. The nature of the workplace is changing. The science of learning and teaching is changing. Fundamentally, society is changing at an unprecedented rate. It's hard to know what effect those changes are going to have beyond our usual ten-year planning cycle.

A few years ago, we realized that unless we started to have

those conversations about what the world and our industry will look like in 2040, we were not going to be able to give our successors a set of investments that were going to carry them into the future.

Evo: What does the more lifelong vision for education shared in *Deliberate Innovation, Lifetime Education* mean for the structure of the education ecosystem and the place of postsecondary institutions?

RD: When we were conducting research for our report, we were told by specialists that the K–12 view of the world is shrinking: in the future, primary and secondary education will be a matter of kindergarten through 10th grade. What we used to think of as the gap between high school readiness and the freshman experience is being replaced by something else. We're not quite sure what to call it, but there's a steady reach of higher education into secondary schools: we can

see it in advanced placement exams and international baccalaureate programs. That's going to continue. As we began to think about that, the idea that there were natural boundaries between the spheres of education became far less relevant. We now know that we are going to have to engage learners much earlier, and engaging early learners is very different from engaging 18-year-old high school graduates.

At the same time, there's a reach towards older learners. There's a lot of data that backs up the idea that learners will be engaging with the university past 24 years old; at Georgia Tech, we've seen that in the growth of our online master's programs. We have to think about erasing barriers on the older side, too.

We know that Georgia Tech graduates are entering industries where the pace of change is accelerating. In our report, we call this the churn of knowledge. Georgia Tech is good at giving people skillsets, but we're not terribly adept at giving them skills to adapt to changing work environments. What do they need to know when the fundamentals of their industry shift out from underneath them? We understand undergraduate education, but we have to learn more about other two bookends: the younger learner and the older learner. That's where we have make investments if we're going to be successful in the future.

Evo: Continuing Education serves as the entry point for both older and younger audiences, but it's a very small doorway into a very large institution. Are you envisioning that the institution itself will start to serve these audiences

directly rather than through CE?

RD: We anticipate that future learners are not necessarily going to be looking for degrees. They're going to be looking at higher education as a lifelong partner as they go from point A to point B. Young professionals aren't finding homes in large corporations but at desks in co-working spaces, and they need education to make the next step in their careers.

At the younger extreme, the world is very complex. A high school sophomore is already confronted with so many more choices than we had at their age. Who is going to be their trusted advisor to help them navigate all of their options? Managing that complexity is beyond what the current system of higher education can handle. We envision that higher education will bear a responsibility for supporting that population of learners throughout their educational journey.

Evo: When you're looking at this vision of the future institution—one that's focused on globally understandable outcomes and lifelong engagement with learners—how do you expect to see the traditional, four-year postsecondary experience evolve?

RD: For the last 150 years, higher education has focused all of its attention on delivering quality educational experiences to 18- to 22-year-olds, but that is a shrinking population. The demographics simply don't favor a continued focus on high school graduates. Fewer and fewer of them are choosing to pursue higher education.

That said, there's a great unmet need for higher ed outside of the traditional

population. When we launched Georgia Tech's Online Master of Science in Computer Science, we were surprised to find that most of the people enrolling didn't currently have access to quality graduate education in computer science. They were working 30-year-olds with families in California. They didn't have the ability to sell the house and pack up the kids to go to Berkeley for two years to earn a master's degree. That entire population of unserved—not underserved, but unserved—educational consumers hit us like a ton of bricks. It really was a driving force behind why we started looking at how we might package new educational products.

Evo: What are a few critical steps that higher ed administrators need to take in order to prepare institutions for this new vision of lifelong postsecondary education?

RD: First, we need to help learners cope with the complexity of choices that they're going to face. While we do have college advisors on campus, they don't play a strategic role; they help students with course selection, but they don't have the tools to help them navigate broader educational choices. We wanted to investigate how technology can help us scale personalized consultation, advising and counseling services. As we move into K–12, more and more learners will be looking for that kind of trusted advice.

Second, we must invest in the technology needed to make that happen. At Georgia Tech, we've made a big investment in artificial intelligence and data analytics for personalizing services, and we decided to turn some of that expertise loose on the problem of personalization at scale for the numbers of people that we will

be serving over the next 20 years. That layer of research has been very important.

Third, it's critical we maintain personal connections. We realized early on that there's a danger in losing the personal contact that students have with their institutions if we try to do everything through technology. That said, Georgia Tech's students will be coming from all over the world, in the future. We had to rethink how to provide face-to-face, person-to-person contact between the institution and its students, regardless of where they're located. What services should be available to students around the world, and what will the business model be for delivering them? We're not exactly sure yet, as we're in the very early design stages, but we know it will not look like a vertically integrated campus. It will be much more organically embedded in global communities, and attuned to the needs of the people who are attending Georgia Tech.

Evo: How do employer and government approaches to higher education need to evolve to facilitate that shift in what students are looking for and what institutions are capable of delivering?

RD: It's always a delicate dance, and one of the things that we have to work out is how to marry employers' expectations with what we think their needs are going to be. I've written extensively on the need for universities to equip students with marketable skills, and institutions like Georgia Tech do a very good job of doing so, but we're also hearing a lot about "21st-century" skills: equipping students with the kind of adaptability that's going to prepare them to handle changes in judgment, changes in how people view teamwork

and leadership. These are the types of things that employers are asking for. We can't develop courses to teach those skills. Those aren't degrees. Those are immersive experiences that develop the kinds of skills that employers are telling us are going to matter. It makes sense to provide students with the skills to adapt to change after they graduate.

Evo: From a government perspective, how do approaches to tuition assistance and financial aid need to evolve to make sure that learners have access to affordable programs that are recognized by stringent quality control standards?

RD: First off, the trend towards MOOCs will continue moving forward. That means there will be a free component to education that doesn't put a burden on the institutions that offer it but broadens their reach to anyone who has access to a computer.

Beyond that, the productivity increases that you get by using technology actually brings down costs for everyone. If we can efficiently provide students with coding skills, for example, and use the cost savings from that part of the curriculum to provide 21st-century training in leadership, that's a good investment for us. Don't think about it as adding something that's costly to an already costly model: think about shifting resources and focusing them on places that are going to matter most.

We're not focused on tuition, necessarily. We're focused on tiers of services that will be available at all kinds of price points for all kinds of people. We know, for example, that there's a market out there for a \$6,000 master's degree in computer science. We also know that there are sub-components within that program

that students who aren't enrolled in the master's program want to access. Every time we unbundle a set of services that we normally think of as a single product and break it into component parts that people can pick and choose from, it positively affects affordability.

Finally, the marketplace will determine the quality of educational products, rather than third-party accreditors. This will have some real cost advantages.

Evo: Is there anything else you'd like to add about how higher education is going to evolve over the next 20 years?

RD: We spent a lot of time thinking about how to transform the mindset of institutional leaders and faculty members to make this vision a reality, and we've chosen the term "deliberate innovation" to capture it. At a research university like Georgia Tech, people think very hard about how to structure their research programs to anticipate future needs, but they spend relatively little time thinking about how to innovate on the academic front. We want to create an immersive culture where all of the incentives and all the rewards flow to individual institutional leaders and faculty members who are consciously rethinking how to deliver education. This idea of deliberate innovation comes from a branch of organizational psychology that has done fairly deep thinking about anticipating needs in order to keep ahead of rapidly changing environments. We didn't invent the concept, but we're applying it where it has never been applied before, which is to education itself.

*This interview has been edited for length and clarity.*