Looking Ahead at IT and Higher Ed: An Interview with Vernon Smith

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IT is simply a tool — not a panacea — and it works best when the focus is on building relationships and culture.

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Vernon Smith has been the chief academic officer at three colleges and universities. He is an academic leader who understands and values the contributions technology can make to advance the academic mission. I first met Vernon when he served on the EDUCAUSE Board, where I learned what a creative, positive, and articulate leader he is.

As part of a January 2018 *EDUCAUSE Review* **article** that took a longer view of the 2018 Top 10 IT Issues theme, I interviewed Vernon about where IT and higher education are and where they're heading. Following is the text of that interview, edited for brevity and clarity. We also created a video of key moments in this fascinating look at IT today and what's to come.

Interview highlights (2:15 minutes): https://youtu.be/Bx27n8tt-LQ

What do you think is the most exciting contribution IT is making to higher education?

Technology is starting to break what I and others call the *iron triangle*, which is the cost, the quality, and the access our students have to education.

In the last decade or so, we've seen the rise of digital information opportunities for online learning — or what we used to call *World Wide Web learning*. It's changed over time, but it's essentially the same

thing: Instead of investing in the heavy cost of more infrastructure in our campuses, and building more rock walls, and more classrooms, we can use that technology to provide instruction and do it at a lower cost and in a scalable solution.

Another example of how technology is breaking the iron triangle right now is the use of open educational resources — materials that are in the commons. We don't have printing costs. We don't have shipping costs. We can do it at the speed of light, which is the speed of electricity and the internet. We can provide these resources to students, which of course reduces that cost for them. That's really a student success issue. We've increased access. We've lowered the cost, and we've actually increased the quality of the materials that are being used.

And what about in the next 10 years?

In the last 10 years, I think the "T" in "IT" was a little bit bigger than the "I." In the next 10 years, the "I" will have more importance than the "T." We sit on mountains and mountains of information, but being able to take that, translate that, be able to federate it, and condense that, and then curate that so that we understand what's actually going on in our students' lives, in our institutions' lives, in our departments' lives, in our own lives. We can understand and do more to be able to make life better and our learning more effective for our institutions and for our students.

What risks might technology pose to higher education over the next decade?

Technology is the great disruptor of professional domains. Think of medicine. Think of health care. Think of other sectors in society. In business transactions, think of the last time you purchased a movie, or purchased refrigerator, or an appliance, how that occurred. The intermediary has changed. The professorial role will have to change as well. It will unbundle and it will have, in my opinion, different specializations, and other professions will rise in those places. And we're seeing that now. We're seeing the rise of instructional designers that are learning specialists that work with the technology. We see the rise of centers for teaching and learning that help translate the pedagogy, or andragogy in this case, to the new context for learning.

Professors who have basically held a cartel, in some ways, on the knowledge are also learning that the best professors do this in a team setting. It's never been a single professor. They're doing it in cross collaboration. They're doing it cross-disciplinarily. Knowledge is so important; those professors that are expanding the world of knowledge know that they can't profess to know all things anymore. They are actually humble, and that's a transition and a translation of that profession into something else.

I believe that you'll see professors who are more specialized in research, professors who are more specialized in teaching. Professors who are somewhere in between, with roles that we don't understand in terms of social engagement, in terms of moving ideas along, in terms of engaging in service with the community. Again, we'll see other professions emerge that aren't going to be like doctors and surgeons, but we're going to have a lot more phlebotomists and physicians assistants and others — we'll see the equivalent of that within higher education.

What are the major challenges that higher education is facing?

Education has been available to the masses only since the last century; before that, it was for those that were the elite of society, those that had access. There's still a struggle going on. If you look at the

question "Who does education serve?" it primarily serves to reinforce and replicate the existing society. That's changing on the margins, but if you look at the top 100 institutions and the bottom quintile of society, you're not going to find much representation.

That will be changing. Over the next decade or so, we've got generational demographics. With the aging of our population, especially with that big part of the Baby Boom, there will be much more pressure for health care and spending on those things. The funds for higher education are not going to be the same. They're literally in competition. So there's a crisis coming in simple demographics. Populations are going to be lower. The 18–22-year-olds, as a population base for higher education — it is not going to be there. There's going to be much more bloody competition for students, for those students especially, those 18–22-year-olds.

The other aspect of this is that, again, the profession itself — the underlying culture of higher education — is going to be held up and questioned. The biggest thing that I think will come into play is this questioning of the public value of higher education. Is it a public good, or is it a private good? Who benefits from that? Personally, I feel that it is absolutely a public good. For example, the police officer. The higher the education level of police officers, the better they're going to interact with their communities, the less likely they're going to go to more brute force…that's absolutely a public good.

What do you think is the most exciting job in higher education IT these days?

You know, there are so many new and emerging jobs and opportunities within higher education in the IT area. Coming from an academic background, I think the most exciting areas and opportunities for wonderful, professional growth and opportunity are found in centers for teaching and learning, where both faculty and staff are taking the technology, looking at ways to apply it in the classroom. Really, that's our sandbox. That's our R&D. That's our skunk works for the future of higher education.

A campus that doesn't have a center for teaching and learning, or a center for excellence in teaching and learning, or something like that, is really missing out. It's actually in that center for teaching and learning where you can bring together your CIO for a conversation, with your networking and your cybersecurity folks. You can also bring the faculty in, which is critical. You can bring students in to a certain extent. You bring the libraries in — librarians also have a very important role.

Digital information, literacy, and digital creation and content — these are critical things. One thing technology does for us is help us to go back to, frankly, our more-human roots of storytelling. Technology helps us tell the digital stories in effective ways at scale that we could not do before. When we look at scientific data, for example, actually being able to see it in a data visualization and a data array, and to understand it — to see patterns and other things that we can pull together — in a digital format, it's comprehensible. We can now differentiate and see: *This is important. This is not important*. So, it helps us in our analysis of differentiation, but then it also allows us again to synthesize things.

The knowledge — it's going to explode. Go back 10 years and see where we were in terms of some of our technologies, and then move forward 10 years — who anticipated YouTube and the bandwidth that came from that? Who anticipated the tablet devices and the access there?

What is the greatest misunderstanding higher education leaders have about IT?

There is a lot of misplaced faith in technology. First, they think it's going to be panacea, that the technology's going to solve the problem. But the technology's still just a tool. It's the human processes that surround it, the cultures, the adaptation, and the implementation of it that make all the difference.

Another part of that, when you adopt that tool, is you think you're going to pay for it only once. You make the investment and that's it. Well, it requires maintenance. These tools require maintenance. There's such a movement of things that you can't expect it to be a solid-state environment. Technology is more like a river in that you can't step in that same river twice. Things change.

What leaders can do is expect vendors and other technology developers to coalesce around standards that make it easier and help the technology be stable and sustainable, both for them and with other systems. Having standards — coalescing around standards and insisting on them — that will help achieve and preserve that stability over time.

Leaders need to understand: it's not a panacea. There are hidden costs. There are maintenance costs, and there are humans that need to be using that tool. A tool is just a hammer, right? Technology's just a hammer. You have to have someone that knows what they're doing with it. Otherwise, you're going to get a lot of bruised thumbs and bad craftsmanship.

Where do you get your inspiration? Who or what helps you think out of the box and who's most worth reading, watching, or listening to?

You know, it is so difficult. Five, ten years ago, there were two or three sources that I could look to and say, "Okay, there's the cutting edge for things." Now, for me, there are a couple of sources that are my go-to sources. EDUCAUSE is one of those. *EDUCAUSE Review* is a wonderful overview. Bryan Alexander's work, I think is a really great source to look at there. Others are emerging, and it really takes scanning and curating to see: *This is important*. To look through the hype and also to understand: *What's the implication of this?*

Also, I'll see things emerge, and people will have said, "Oh, did you see this? We should be doing this." And it's like, "Let's *not* do that." I looked at the explosion of MOOCs in 2013. I looked at this — and I'm a traditional online, digital learning guy — but I looked at it and said: *This will pass*. There was a fury and a buzz that was there, but I realized, while it was scalable, yes, who was it serving? Was it really addressing the problem that it said it was addressing? It wasn't addressing all of the higher education sector — it was really serving those who had already been served by higher education.

It's the underlying things that let you know if something is going to have long-term implications. For example, competency-based education will have long-term implications because it's based on fundamental apprenticeship practices. Things around adaptive learning are based on very strong principles of human learning that have been tested over the last couple of decades. Those things are going to last, and they're not going to go away.

I try to look at the deeper trends and see where those are … read everything, but be a little bit skeptical of everything that you're seeing. Be skeptical of the hype. Then, look at the trends that are continuing. Look at that iron triangle. Is this addressing quality? Is it addressing cost? Is it addressing access? If it's touching one of those things, then it's probably something worth looking at. If it's really cool and has a lot of window dressing? It's probably not the greatest thing.

What advice do you have for CIOs?

CIOs can be one of the most effective agents for change in higher education, but they also can be one of the most effective forces for stability and maturity within an institution. I believe in what I call an *academic technology framework*: The CIO is in charge of enterprise technology, but they're also supporting the academic technology, which is the teaching and learning aspects.

I would recommend to CIOs that, as they get to know the different aspects of their organization, they help build the rules of engagement and the rules of domain about where decisions will be made about certain things. Faculty members feel very strongly that they should hold on to decisions around teaching and learning and what's used in the classroom. Well, that's a domain that CIOs should not run into, but they need to know where that domain is. Then again, the faculty needs to be aware that when CIOs decide what the student information system is going to be, while they should use faculty input, it's still an enterprise-level solution.

Then again, the faculty needs to be aware that when CIOs decide what the student information system is going to be and they use faculty input, it's still an enterprise-level solution.

CIOs need to look at their cyberinfrastructure and their information system security infrastructure. That's really a CIO domain — how students access things. What is the role of the library? I would say, as far as advice: Know who you are, know what the domains are and who needs to be brought in, and then start having those conversations.

Look to your librarians. Look to your faculty leaders. Look to your center for teaching and learning — and have those discussions — and have a place to go and just vet ideas. Build that trust, where you can say, "Hey, I'm thinking about going down these roads. Who needs to be involved here? Who needs input on this, on these decisions, and how can we get there?"

And of course, new CIOs need to look for some low-hanging fruit. A simple victory like just hooking up someone's printer to the network — just making something that simple useful for them — will go a huge distance in building relationships. It's not about the technology again. That's just the tool. It's about the relationships. It's about building the culture and stabilizing that.

The last part of that I would say is that CIOs need to make sure that the president understands their roadmap, and also make sure they understand how they can help the president and the provost of the institution get where they need to go. There's nothing I like hearing as a provost more than when my CIO says, "Yeah, I can support you in that. What do you need to make that happen?" That's music to my ears. Many more presidents and provosts need to hear that.

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