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## Could Many Universities Follow Borders Bookstores Into Oblivion?

March 7, 2012, 7:44 pm  
By Marc Parry



Atlanta — Higher education's spin on the Silicon Valley garage. That was the vision laid out in September, when the Georgia Institute of Technology announced a new lab for disruptive ideas, the [Center for 21st Century Universities](#). During a visit to Atlanta last week, I checked in to see how things were going, sitting down with Richard A. DeMillo, the center's director and Georgia Tech's former dean of computing, and Paul M.A. Baker, the center's associate director. We talked about challenges and opportunities facing colleges at a time of economic pain and technological change—among them the chance that many universities might follow Borders Bookstores into [oblivion](#).

**Q. You recently wrote that universities are "bystanders" at the revolution happening around them, even as they think they're at the center of it. How so?**

**Mr. DeMillo:** It's the same idea as the news industry. Local newspapers survived most of the last century on profits from classified ads. And what happened? Craigslist drove profits out of classified ads for local newspapers. If you think that it's all revolving around you, and you're going to be able to impose your value system on this train that's leaving the station, that's going to lead you to one set of decisions. Think of Carnegie Mellon, with its "Four Courses, Millions of Users" idea [which became the [Open Learning Initiative](#)], or Yale with the humanities courses, thinking that what the market really wants is universal access to these four courses at the highest quality. And really what the market is doing is something completely different. The higher-education market is reinventing what a university is, what a course is, what a student is, what the value is. I don't know why anyone would think that the online revolution is about reproducing the classroom experience.

**Q. So what is the revolution about?**

**Mr. DeMillo:** You don't know where events are going to take higher education. But if you want to be an important institution 20 years from now, you have to position yourself so that you can adapt to whatever those technology changes are. Whenever you have this kind of technological change, where there's a large incumbency, the incumbents are inherently at a disadvantage. And we're the incumbents.

**Q. What are some of the most important changes happening now?**

**Mr. DeMillo:** What you're seeing, for example, is technology enabling a single master teacher to reach students on an individualized basis on a scale that is unprecedented. So when [Sebastian Thrun](#) offers his Intro to Robotics course and gets 150,000 students—that's a big deal. Why is it a big deal? Well, because people who want to learn robotics want to learn from the master. And there's something about the medium that he uses that makes that connection intimate. It's not the same kind of connection that you get by pointing a camera at the front of the room and letting someone write on a whiteboard. These guys have figured out how to design a way of explaining the material that connects with people at scale. So Stanford all of a sudden becomes a place with a network of stakeholders that's several orders of magnitude larger than it was 10 years ago. Every one of those students in India that wants to connect to Stanford now—connect to a mentor—now has a way to connect by bypassing their local institutions. Every institution that can't offer a robotics course now has a way of offering a robotics course.

I think what you see happening now with the massive open courses is going to fundamentally change the business models. It's going to put the notion of value front and center. Why would I want a credential from this university? Why would I want to pay tuition to this university? It really ups the stakes.

**Mr. Baker:** There used to be something called Borders, you may remember. Think of Borders, the bookstore, "X, Y, Z University," the bookstore. If you've got Amazon as an analogue for these massively open courses, there is still a model where people actually go into bookstores because sometimes they want to touch, or they like hanging out, or there's other value offered by that. What it means is that the university needs to rethink what it's doing, how it's doing it. And how it innovates in a way of surviving in the face of this. If I can do the Amazon equivalent of this open course, why should I come here? Well, maybe you shouldn't. And that's a client that is lost.

**Mr. DeMillo:** All you have to do is add up the amount of money spent on courses. Just take an introduction to computer science. Add up the amount of money that's spent nationwide on introductory programming courses. It's a big number, I'll bet. What is the value received for that spend? If, in fact, there's a large student population that can be served by a higher-quality course, what's the argument for spending all that money on 6,000 introduction to programming courses?

**Q. You really think that many universities could go the way of Borders?**

**Mr. DeMillo:** Yeah. Well, you can see it already. We lost, in this university system, four institutions this year.

**Mr. Baker:** The University System of Georgia merged four institutions into other ones that were geographically within 50 miles. The programs essentially were replicated. And in an environment in which you've got reduced resources, you can't afford to have essentially identical programs 50 miles apart.

**Q. So what sort of learning landscape do you think might emerge?**

**Mr. DeMillo:** One thing that you might see is highly tuned curricula, students being able to select from a range of things that they want to learn and a range of mentors that they want to interact with, whether you think of it as hacking degrees or pulling assessments from a menu of different universities. What does that mean for the individual university? It means that a university has to figure out where its true value sits in that landscape.

**Mr. Baker:** Another thing we're looking at is development of a value index to try to calculate, to be vulgar, the return on investment. Our idea is to try to figure out ways of determining what constitutes value for a student, based on four or five personas. So for, let's say, a mom returning at 50 who wants an education—she's going to value certain things differently than a 17-year-old rocket scientist coming to Tech who wants to get through in three years and knows exactly what she wants to do.

**Mr. Demillo:** Jeff Selingo wrote a [column](#) about this, having one place to go to figure out the economic value of a degree from a university. It's a great idea, but why focus only on the paycheck as an economic value? There are lots of indicators of value. Do students from this university go to graduate school by a disproportionately large number? Do they get fellowships? Are they people who stay in their profession for a long period of time? You start to build up a picture of what students tell you, of what alumni tell you, was

the value of that education. Can we pull these metrics together and then say something interesting about our institution and by extension others?

**Q. What other projects is your center working on right now?**

**Mr. DeMillo:** The *Khan Academy*—small bursts of knowledge that may or may not be included in a curriculum—was a really interesting idea. Can students generate this kind of material in a way that's useful for other students? That's the genesis of our *TechBurst* competition [in which students create short videos that explain a single topic]. It turns out there's a lot of interest on the part of the students at Georgia Tech in teaching what they know to their peers. The interesting part of the project is the unexpected things that you get. We had a discussion yesterday about mistakes. This is student-generated stuff, so is it right? Not all the time. Which causes great angst on the part of traditionalists, because now we have Georgia Tech *TechBurst* video that has errors in it. If these were instructional videos that we were marketing, that would be a very big deal. But they're not. They're the start of a thread of conversation among students. There's one on gerrymandering. So it's a political-science video, it's cutely produced, but in some sense it's not exactly right. And so what you would expect is now other students will come along and annotate that video, and say, well, that's not exactly what gerrymandering is. And you'll start to see this students-teaching-students peer-tutoring process taking place in real time.

**Q. What about the massive open online course Georgia Tech will run in the fall?**

**Mr. DeMillo:** The idea of a massive open course is something that people normally apply to introductory courses. What happens when you look at a massive open advanced seminar? A seminar room with 10,000 students, 50,000 students—what does that even mean? We've got some people here that have been blogging for quite a while about advanced topics. In fact, one of the blogs—*Godel's Lost Letter*, by Professor Dick Lipton of Georgia Tech, and Ken Regan of the University at Buffalo—is about advanced computer theory, so it's a very mathematical blog. It's in the top 0.1 percent of WordPress blogs. A typical day is 5,000 to 10,000 page views. A hot day is 100,000. The question is can we take this blogging format and turn it into an online seminar.

**Q. How would that work?**

**Mr. DeMillo:** The blog is essentially an expression of a master teacher's understanding of a field to people that want to learn about it. We think that there are some very simple layers that can be built under the existing blogging format that can essentially turn it into a massive open online seminar. It's also a way of conducting scientific research. When you think about what happens in this blog, it celebrates the process of scientific discovery. I'll just give you one example. Last year about this time some industrial scientist claimed that he had solved one of the outstanding problems in this area. In the normal course of events, the scientist would have written up the paper, would have sent it to a conference. It would have been refereed. Nine months later the paper would have been presented at the conference. People would have talked about it. It would have been written up to submit to a journal. Refereeing would have taken a couple of years for that. Well, the paper got submitted to Lipton's blog. It just caused a flurry of activity. So thousands and thousands of scientists flocked to this paper, and essentially speeded up the refereeing of the paper, shortening the time from five years to a couple of weeks. It turns out that people came to believe that the claim was not valid, and the paper was incorrect. But what an education for future research students. You get to see the process of scientific discovery in action.


This is an interesting bookend to the idea of a massive open course. Because the people that are thinking about the massive open online courses for introductory material have a set of considerations. Students are at different levels of achievement. Assessment is very important. The credentialing process is dictated by whether or not you want credit. If you go to the other end of the curriculum, and say, well, what happens when we try to do these advanced courses at scale, credentialing is completely different. Assessment is completely different. You can't rely on the same automation that you could in the introductory courses. Social networks become extremely important if you're going to do this stuff at scale, because one professor can't deal with 100,000 readers. He has to have a network of trusted people who would be able to answer questions. The anticipation is that a whole new set of problems would come up with these kinds of courses.

*This conversation has been edited and shortened.*

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**jwr12** 1 month ago

Just an observation: this whole conversation occurred without a word being said about either the maintenance of traditions of scholarship, or the development of new higher-level research. The idea seems to be that the future of education involves a small number of "masters" teaching to masses. A brief reference is made to what a blog experiment can teach a "research student," but where that research student might be employed is not described; one presumes industry, however, since there will be many fewer institutions of higher education under this scenario (as there are bookstores).

Now I realize a lot of people don't care about any of that. And I know they have their reasons -- often quite democratic sounding -- for doing so. To be honest, I'm not really interested in debating the morality. But this future posits a world in which universities are redefined not as learning communities that both teach and research, but are rather distribution nodes for "master" content. And since we don't need many nodes, those will go. The result is also a world in which (therefore) the traditional model of teaching being one of the activities by which researchers earn a living will be gone; the link between teaching and research will be broken.

So I guess my question for the Georgia State people is: do they not care about research? Do they really think the only function of colleges and universities is to spread "master" content? And do they think such content will remain innovative -- as opposed to being simply the production of beautiful people in beautiful places -- if not backed by a large universe of working, everyday researchers?

Is there a vision of how research will be conducted, how fields of knowledge will be maintained, that accompanies this vision of teaching detached from research? (I know, undoubtedly, the model here claims to envision student research as part of learning; and that's great; but nonetheless it is the case that fewer teachers equals fewer researchers who have the time to really think deeply into a subject. And not even Wikipedia can replace that.)

168 people liked this.



**jaynicks** 1 month ago in reply to jwr12

[jwr12](#), very good and thought causing questions. Thank you.

The piece raises several questions, at least for me:

Is it the case that shortly after WWII with the generous GI Bill of the times that the mass production model for lower level courses became normative?

Did the discussions about this change to education parallel the ones we are seeing today regarding the same principles with different methods?

Is Oxford alone or only a rara avis in its successful use of a tutorial teaching model? I found several interesting articles searching for "oxford tutorial system" which answered this at least by indicating Queens University in Belfast uses the method so there must be others.

Are there other models worth investigating? e.g. St. Johns of Annapolis and Santa Fe perhaps.

Are honors programs at universities an attempt to rectify problems with the increasingly overwhelming sizes of lecture halls in lower level courses?

Depending on the answers to these and many other questions there may be models of future education that are not so dire. Constructing one such may raise some other questions:

If budgets remained constant (relative to cost of living) for universities, and if many lower level courses were transferred to online courses from masters teaching centers, would not the teaching work load on professors diminish and the chances for tutorials and research expand considerably?

Could we start to dispense with highly paid administrators whose function is to attest to funding institutions that they are constantly and repetitively prating to faculty about class sizes, relevance and 'productivity'?

Or, could we offload that function of administrators to YouTube and have administrators start to wonder about the traditions of scholarship and higher level research?

What would be the effects of revamping honors programs to be only tutorials for far fewer students, perhaps differently selected than simply those who are GPA performers?

Alternatively, if a major university has an honors program, should it not also be experimenting with a tutorial model?

What are the methods of using this disruptive technology to return us to the Elysian days [sic] of the pre-GI Bill traditions of education and research as documented in the Indiana Jones works [sic]?

By asking these questions in this forum, am I asking for crowd sourcing?

(Edited by author 1 month ago)

25 people liked this.



**waratah104** 1 month ago in reply to jaynicks

Great insights, especially with regard to St. Johns and honors colleges.

2 people liked this.



**alba\_** 1 month ago in reply to waratah104

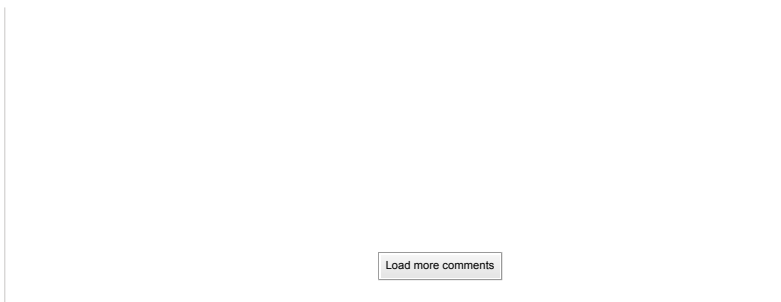
There are elements of St. John's College (Annapolis and Santa Fe) to be admired. However, the curriculum is ossified, the faculty are disconnected from the outside world, and the students become proficient in analysis but handicapped in synthesis. It is beautiful in its monasticism, not a model to be duplicated blindly.

6 people liked this.



**arminius** 4 weeks ago in reply to waratah104

I heartily agree with your points about St. John's and one might add other liberal arts institutions such as



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**bbeckman1** 1 month ago [in reply to jaynicks](#)

**3rdtyrant** 1 month ago [in reply to jaynicks](#)

**Dr\_Zachary\_Smith** 4 weeks ago [in reply to 3rdtyrant](#)

**shawnmehan** 1 month ago [in reply to jwr12](#)

**stephen\_said** 1 month ago [in reply to jwr12](#)

**jwr12** 1 month ago [in reply to stephen\\_said](#)

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**unemployedacademic** 1 month ago in reply to jwr12

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