

Can Higher Education Save Itself?
The Future of American Colleges and Universities
Boston Athenaeum
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“The trouble with our times is that the future is not what it used to be.” [Paul Valery (1871–1945)]

Change is the new normal.

Convergence, disintermediation, and asynchronicity characterize our new world. Multiple media platforms create, store, and distribute content across convergent forms of text, audio, images, animation, and video. Technology will continue to ease access to content, products, and services unmediated by supply chains that to this generation of young people must seem quaint, even ancient. Twenty-first century technology obliterates time and space, giving us the capacity to communicate and access content almost instantaneously. Each year, with dizzying speed, new powerful instruments of change are being developed.

The world has witnessed dramatic shifts in how we communicate in the past. Much like the invention of Gutenberg’s printing press, the recent upheaval seems tectonic, unprecedented in the scope and the speed with which it has effected change.

In this modern-day ecosystem, those who adapt, survive: Amazon.com. Those who are nimble, thrive: Netflix. Those who are neither, become obsolete: Borders Book Stores.

This new world compresses time. Google just turned 15 years old, Facebook is 10, and Twitter is 8 and yet they seem, well, so traditional – so old school and even a bit stodgy. Snapchat and Vine are still in diapers – not two years old yet.

Even texting has peaked and is on a decline, replaced by free apps, especially in Europe.

In all likelihood, these businesses will not exist when my children are my age or, if they do, they will be unrecognizable to us today. Competition will increase and, as a result, produce rapid change. Facebook will not be a hip social media site, but will, instead, become a distribution channel for content and a digital link for businesses, people, and organizations.

Today’s and succeeding generations will gravitate to social media sites that are the most disintermediated – that is to say, sites (or anything for that matter) that require little or no mediation between them and the content they access or the function they perform. The more disintermediated they are, the more they will be accepted by the young consumer.

Young people, ages 15 - 18 – our future college students – have been both shaped by and continue to help shape this age of change. Change piled on top of change.

I have three children, ages 25, 20 and 15. In technology time, they represent three distinct generations and their orientation to technology is different in each case, the youngest of whom is more adept and a more frequent user of the latest and greatest app – whatever it may be. When I asked her (and her friends) if she used Facebook the way she did two years ago, she said, “no;” she uses it less than her two older siblings; when I asked her “why?” she said, “because it involves moving around too much stuff.” It requires a level of maintenance that Instagram, Tumblr, and Flickr don’t.

However, all three expect direct, on-demand, unmediated access to content. They don’t sit down in front of the television and channel surf. They choose what they want to watch when they want to watch it. They have multiple platforms from which to access the content they want any time and anywhere.

For today’s youth, nothing lasts: not the words they speak, not the sentences they write (if they write sentences anymore), not the photographs they take. Recorded history is everywhere and nowhere. Time has collapsed on itself.

This is the future; this is the now. These are the people who will be coming to our colleges—and this isn’t even the group raised on iPads in pre-kindergarten.

This is an exhilarating world of constant, relentless change, but it is also a source of concern to college presidents (and our Boards of Trustees). We also worry about other environmental changes threatening our traditional business model(s): we worry about rising tuition costs and growing student indebtedness. We worry about the continual erosion of state support for public universities; we worry about the Great Recession, from which we have not fully recovered; we worry about stagnant family incomes; we worry about persistent underemployment and bleak job prospects for our graduates; we worry about faculty guaranteed jobs for life who may see no reason to incorporate technology into teaching or predict the evolution of their fields; we worry about the ever-increasing pressure to make clear (and make good) on student learning outcomes; we worry about the tsunamic wave of a more diverse, economically disadvantaged, and less prepared student population with more needs that is arriving at our door steps even as I speak; we worry about return on investment; and risk and more risk.

As pressures on our colleges’ traditional business proposition increase, what does higher education’s future look like in this fast moving and ever-evolving digital revolution?

Our risk profile is mixed, but trending negative.

Certainly, student debt and questions about learning outcomes are big issues.

Yet demand for access to higher education remains very high (in fact, it has never been greater, especially at expensive elite colleges), in large part, because prospective students and their families still view a college degree as the best investment in the future that the average citizen can make. College graduates will earn an average of \$2.3 million over the course of their careers—almost twice as much as those with just a high school diploma.

As the *New York Times* reported recently, Brown University offered admission to the lowest fraction ever of the applicants it received this year: fewer than 1 in 10. The arithmetic was even more brutal at Stanford, Columbia, Yale and Harvard. The University of North Carolina at Chapel Hill had a record number of students vying for its next freshman class and accepted about one in six who applied from outside the state. Notre Dame took about one in five of its applicants. Several Boston area schools, including Emerson, reported record applications this year – as they did last year.

Consider this: Harvard will enroll roughly 1650 first-year students in the fall. Imagine if it were, say, to enroll 1630 students (rather than 1650) based on meritocracy alone and then put the remaining 20 spots on e-Bay for a beginning bid of \$1 million per spot. What would happen? Do you think it would be able to fill those remaining 20 spots? Of course, it would. And at a cost that would far exceed the \$1 million opening bid.

Student debt in our country now exceeds a trillion dollars. However, the disaggregated reality of those trillion dollars is not as bleak as the public press would have us believe. According to the Council of Independent Colleges, “one third of students who graduated with a bachelor’s degree did not have any educational debt. The average debt level of bachelor’s degree recipients who borrowed for college is...[a little more than]... \$20,000—about the price of a modest automobile. Moreover, the gap between the debt levels for students at public versus independent institutions is not very large: [\$18,000] versus [\$24,000], respectively. Students who attend for-profit colleges (approximately 11 percent of all students) account for nearly half of all defaults. Median debt for students at for-profit institutions is much higher, at [almost \$33,000].” [See Council of Independent Colleges, *Student Debt: Myths and Facts*, <http://www.cic.edu/Research-and-Data/Research-Studies/Pages/Student-Debt.aspx>]

And yet, a trillion dollars is still a lot of money, no matter how you slice it.

The elite, high-brand colleges will exist as long as there are enough wealthy families willing to pay the price and as long as their endowments remain robust. No doubt, this is also true for second and third-tier colleges, even those with modest endowments.

However, there is a group of schools still recovering from the Great Recession and the decreased purchasing power brought about by persistently stagnant family incomes. With reduced liquidity, high-debt loads, and declining or unreliable enrollments, these colleges are seeking new revenue sources and changing their business models. Undoubtedly, a few of them will go out of business. I say “a few,” because colleges and universities are very resilient, even in tough economic times.

The pressure to diversify revenue sources of growth is great. Consider, for example, those who rent out their campuses, run summer camps, create alumni travel programs, create tech ventures with the cities in which they reside. However, the potential is offset by competitive forces and a high tuition, high financial aid model, the latter of which reduces net revenue growth.

In the private sector, we have done a pretty good job of holding down net tuition cost. Note that I said “cost,” not “price.” Cost is what you pay out of pocket and the latter is the published price before institutional financial aid kicks in.

In the past decade, tuition and fees at private colleges have increased just 2.4% annually above the rate of inflation, not bad given how low inflation was during this period.

The average inflation-adjusted net tuition and fees cost at private colleges has actually dropped by 4 percent during the last six years because of extraordinary investments in financial aid.

. [See Nation Association of Independent Colleges and Universities, *Enhancing Affordability*, http://www.naicu.edu/special_initiatives/affordability/about/.]

So far, technology has proven to be neither a revenue nor a cost savings panacea. The business model for Massive Open Online Courses or so-called MOOC's is unclear, though we will continue to see significant increases in digital curricula that will either replace or more likely supplement traditional classroom learning environments. Even those are risky—witness the rapid rise and fall of 2U designed to bring faculty lectures from elite colleges as a study online semester to students who wouldn't have access to these topics and famous professors. Total time in play, two semesters.

Janet Napolitano, the relatively new president of the University of California, recently said in an interview:

I think there's a developing consensus that online learning is a tool for the toolbox, where higher education is concerned; that it is not a silver bullet the way it was originally portrayed to be. It's a lot harder than it looks. And, by the way, if you do it right, it doesn't

save all that much money, because you still have to have an opportunity for students to interact with either a teaching assistant or an assistant professor or professor at some level. And preparing the courses, if they're really going to be top-quality, is an investment as well. (Chronicle of Higher Education, March 27, 2014 by Steve Kolowich)

I tend to agree. I've been singing this song for many years now because until there is a major break through in how we think of and conceive a college education – which I will discuss later – technology will not change the cost curve much. Only a major shift in the business model will change the cost curve. Technology can facilitate a new business model; however, it is not in and of itself a substitute for it.

The news from Washington isn't very cheery either. Despite the recent budget deal in Washington, the outlook for federal research grants continues to be flat. The availability of federal student loans may be restricted further.

The pressure from the White House Initiative on College Affordability is intended to make college more affordable, but is likely to have unhappy unintended consequences. For example, the initiative ties federal funding for financial aid to institutional performance, thereby privileging the wealthy colleges, which will be able to support students on a scale that less wealthy colleges cannot match. Less wealthy colleges and the students they serve will suffer as a result.

At the state level, the situation is bleak and has been for several decades. State legislatures, more or less, have turned their backs on higher education, slowly unraveling the social compact made after World War II, which sought to make college more accessible and affordable to the veterans returning from combat. Even in the face of four decades of steady growing demand for higher education, state funding has been in a shameful retreat.

Other than Wyoming and North Dakota, the states have reduced their support by anywhere from 15 percent to 70 percent between fiscal 1980 and fiscal 2011.

In fact, public universities are headed towards privatization. Examples include the University of Michigan, whose state funding accounts for less than 10 percent of its operating budget. Closer to home, Rhode Island has reduced state higher education funding by 62 percent during this period.

Extrapolating this trend, we see that state funding for higher education may reach zero before 2050, including Massachusetts (2035), New Hampshire (2048), New York (2038), Texas (2047) and Wisconsin (2040).

Of course, the reduction in state funding has shifted more of the burden of financing college to students, who have endured steep increases in public university tuition. Many public universities are enrolling fewer students from lower-income families and more students who can afford to pay higher tuitions with institutional discounts. They are recruiting non-resident and international students whom they can charge higher tuition than in-state students. (See *Thomas Mortenson, senior scholar at The Pell Institute for the Study of Opportunity in Higher Education in Washington, D.C., and an independent higher education policy analyst living in Oskaloosa, Iowa*).

The problem is that states tend to cut funding for higher education and student aid programs when they are needed the most by low-income students and universities tend to raise tuitions when low-income students can least afford such increases.

One of the outcomes of this awful cycle is that universities have less capacity and students have fewer opportunities – and money – to complete their degrees.

The states blame their universities for failing to hold down costs and tuition growth, and the universities blame the states for cutting budgets.

Not a very pretty picture, is it?

So, the question is: can higher education save itself? How do we navigate this brave new world of change and more change? How do we properly prepare for future generations of students who expect disintermediated on-demand access to content across convergent platforms any time and anywhere? What can we do about the cost curve, shrinking net revenues and growing student debt?

What do we need to change?

One thing is certain: the barriers to change are formidable.

Colleges are resistant, even hostile to change. They are, by and large, tradition bound and hierarchical. They tend to be inward looking, even in the face of the external challenges that confront them.

Moreover, because colleges are more impressed with credentials than they are with talent, they some times miss opportunities to hire really talented people.

Colleges are comprised not of a single monolithic culture, but multiple cultures – each with its own interests, training, world-view, and orientation to the institution, making systemic change very difficult. The modern day college president is more like a symphony conductor than a CEO, and requires the orchestra's patience, trust, and confidence to lead successfully.

Oh, I forgot: and an iron stomach.

Change is made more difficult because administrative culture and faculty culture tend to mistrust one another. The administrative culture tends to see the faculty culture as a guild to be managed, while the faculty culture tends to see the administrative culture as a barrier to getting its work done (or worse). In each case, the opportunity for collaboration and putting to good use the full potential of the talent within each is diminished, if not lost altogether.

Colleges and universities are slow to change because they are labor intensive and highly inefficient. As one economist put it: “The service [that colleges and universities provide] is [mostly] the time of the service provider, and you cannot use less of the provider’s time without compromising the quality of the service. Also, the service providers in many of the relevant industries — doctors, lawyers, dentists and college professors — are highly educated, highly skilled workers. In the last quarter of the last century, economic forces generated rapidly increasing wages for highly educated, highly skilled workers. The combination of these two factors, slow productivity growth and rapidly expanding wages, results in rapidly rising prices.” (*Why Does College Cost so Much?*, Robert B. Archibald and David H. Feldman)

The corporate business model, while useful in higher education management, is nevertheless limited. Neither General Motors nor General Foods cares who buys their products. In the higher education business, because the customer is also the product, colleges do care and spend as much of their time figuring out how to service the customer as they do figuring how to shape the product. It is in this sense that higher education is a public good in ways that General Motors is not: colleges provide a transformative experience for its students that they hope will make them informed and engaged citizens in a democracy. In doing so, the entire nation benefits. However, it is this transformative experience that is both expensive and inefficient.

Moreover, we often mistakenly think of a university or college as having a single core business when in fact it has several. The modern college is more like a holding company for several businesses, each of which has its own peculiar culture, return on investment, operating model and so on. Add to the core enterprise of teaching and learning, university hospitals, university museums, research and development operations, student residences, performing arts centers, civic engagement centers, multiple campuses, big-time athletics and so on and you get the picture. With so many moving parts, systemic change is difficult.

As already noted, we are a labor-intensive organization made up of a highly skilled labor force. Yet, one of our central business principles is upside down: the highest paid and most valued faculty tends to teach less and the poorest paid, tend to teach the most. This is especially true at elite research universities where teaching loads for full professors tend to be very low. I have a friend at a top tier research university, who, as far as I can tell, never teaches any more and has done so for several years. Of course, I’m exaggerating, but I’m trying to make a point here.

All of this reminds me why trying to bring about change at a college is often compared to trying to move a cemetery. It's an awfully hard thing to do.

As innovation has overtaken the rest of the economy, boosting productivity, lowering prices, and improving quality, it is natural to ask, "when and how will innovation come to colleges and universities?"

While it is undeniably true that higher education historically has been very good at creating innovation that benefits society, it gets a failing grade in its effort to create the structural innovation within its own institutions so that it might be responsive and nimble to change.

As one writer rather harshly put it:

The university is home to structures that enable deep specialization and protect scholars from each other and the outside world. There is a dark side to the history of the university. It is largely a history of ossification punctuated only too rarely by bursts of intellectual vibrancy and structural innovation. In the large sweep of history, change occurs not because existing scholars, departments, and institutions move with the times, but through replacement. New ideas and methods are developed by new generations of scholars working in newly founded disciplines. New structures that support new forms of inquiry and learning emerge in newly founded universities. (*Herding Cats, Moving Cemeteries, and Hauling Academic Trunks: Why Change Comes Hard to the University*, Susanne Lohmann Professor, Department of Political Science, University of California, Los Angeles, p.15)

If true, then what are we to do?

I have five ideas, most, if not all of which, will sound heretical to many of my colleagues.

First, dismantle the academic departments as we know them.

Here I am not talking about firing faculty or jettisoning disciplines, but rather about radically overhauling the departments – reconfiguring some and dismantling others - so that they are more responsive to change.

We tend to view departments with a sacred reverence, as if they are inviolate. But they are not. They come and they go. They are artifices, the architecture in which we house the disciplines and the faculty who teach and do their research in them.

Departments are vertical. Students experience departments as an upward progression, beginning with prerequisites, then upper division courses and finally, capstone projects.

Departments are silos. They are by nature inward looking and tend to create barriers that, over time, become ossified and protectionist as noted earlier, despite well-meaning periodic departmental and program reviews that are meant to guard against both.

Departments should be flatter and there should be fewer of them. They are centrifugal, when they should be centripetal, moving from the center out with multiple disciplines that spread out, overlap and interconnect. The best learning in the 21st century takes place in the liminal spaces where disciplines intersect and criss-cross. And while interdisciplinary programs have been a good thing for learning, robust discourse and developing new modes of inquiry, over time, they, too, bend towards specialization and become permanent structures and, as a result, devitalize the sources of innovation - intellectual energy, dynamism, fluidity and porosity - that brought them into existence.

For this reason, departments should not be permanent. In fact, they should be just the opposite because permanence impedes innovation. Permanence will always turn inward on itself, sheltering established traditions and positions, which, in turn, stunt intellectual renewal and invention, while weakening opportunities for new ways of knowing.

Departments should be elastic, not rigid.

A dynamic, fluid and pliant curriculum innovates the learning environment. Departments comprised of a constellation of intellectually connected disciplines stimulate ideas that give birth to innovation. It's at the intersection of ideas where we find the sparkle and energy of dynamic thinking. We need more, not less of this.

In a department of multiple disciplines, students might share a common core curriculum and a set of prerequisites that would cross and knit together the disciplines in preparation for advanced study and capstone projects. In this type of learning environment, the curriculum would be broader and deeper and students would move freely among multiple disciplines without departmental barriers blocking their way. Faculty, liberated from the narrow confines of their departments, would also have more freedom and incentives to collaborate with more colleagues across disciplines and develop new, exciting, cutting edge fields of inquiry.

Second, radically change how we deliver education.

By this, I mean radical change, not just at the margins. College presidents, deans and faculty talk a lot about this topic whenever we get together, but we rarely do anything about it because college leadership is timid, risk adverse and tradition bound. Real and effective change comes not with moving parts around, but by creating something wholly new. But to do so, would require more bravery and less self-congratulatory posturing than exists now on our campuses.

Believe me, rare is the college that dares to do something entirely new.

Here's an idea that challenges traditional notions of what it means to be truly educated in an American college or university: let's create three-year undergraduate degrees that cut tuition costs by a quarter. Here, I'm not talking about figuring out a way for students to cram a four-year college degree in three years, as some colleges do. Rather, I'm suggesting that we re-imagine our curriculum and our residential college paradigm from top to bottom so that students can complete their degree in three years at a much lower cost and with the same student learning outcomes of a four-year degree.

The four-year college model is sacred. But is it relevant in all cases and for all students? Of course not, especially as we become more reliant on technology to deliver education. As noted above, technology alone cannot reduce costs. However, technology, at the service of a new idea, would reduce costs, including, for example, digitizing the first year of instruction or giving students credit for a highly structured gap year.

Departments, by and large, believe that what they offer is such a good thing that students would benefit by having more of it. This is a natural and inevitable tendency. It's a state of mind that leads to a constant turf war over who owns the largest share of the curriculum as departmental, general education and elective courses fight over who gets more seat time. However, what would happen if we reduced elective, general education and department course requirements across the board by a quarter each or alternatively by, let's say, an eighth for department and general education courses and a half for electives? I can hear the gasps and shocks of horror. However, reducing both by an eighth would only require reducing department and general education requirements by a couple of courses or so over a four-year period. Clearly, most students have plenty of choices beyond department and general education courses, as the proliferation of double and even triple minors appear on their transcripts. Would it materially harm their education, if they had a fewer electives from which to choose? I think not.

What I am proposing would be possible, especially if we were willing to refigure the departments as something other than the fiefdoms they currently are and create the flatter, broader structures that I talked about earlier, where students are able to move freely across a broad swath of converging and intersecting disciplines that share common prerequisites and general education requirements.

Another model might be a four-year degree that includes three years of formal study and seat time and a fourth year off campus, where students engage in experiential or project based learning or create a directed research project abroad or start their own business or write a novel - all for credit, but at a greatly reduced cost. Residential colleges pride themselves on educating people who, having mastered academic disciplines and developed varied skills, will put into play

the fullness of their potential as leaders and shapers of society. However, a large fraction of these critical learning outcomes are developed outside the formal curriculum structure, in service projects, internships and other activities. So, let's imagine a way to interweave these learning experiences into the undergraduate degree, quantify and assess their value, thereby reducing seat time and cost.

Finally, let me make it clear that I'm not proposing three-year degrees for all colleges and universities, but rather at some institutions where doing so would be congruent with their mission, especially those that value project and experiential based learning.

Third, create more fluid faculty work and reward structures.

We've been kicking this can down the road for almost a quarter century, ever since Ernie Boyer issued his manifesto, *Scholarship Reconsidered*, which argued for a broader definition of faculty work. He suggested that scholarship was not uniform in a single academic career or across a single institution, but was, in fact, varied. He identified several types of scholarship: of discovery, of integration, of application, of teaching and learning, each of which he said should be appropriately acknowledged and rewarded for its contribution to academic excellence. He noted that while the scholarship of discovery (i.e., research) historically has been acknowledged by the academy as the central and dominant activity of faculty work that the time had come to consider (and reward) other equally valuable and valid types of faculty work.

It was (and remains) a powerful idea. It takes into account the evolution of academic life. For instance, technology and new media are forcing us to reconsider what constitutes research, especially in certain areas. As an example, to what extent should blogging in well-established media outlets be considered a research activity? Despite these changing realities, we struggle to recognize other faculty activities as scholarship because to do so threatens the dominance of the research mission as the *sine qua non* of the academy, when, in fact, the academy has been and is increasingly multi-faceted.

Let me say here that I support the tenure system in its ideal. I am not suggesting that we eliminate it, but rather broaden the parameters by which faculty are judged to be worthy of it.

The devaluation of scholarship other than research is one of the best examples of academic protectionism that I know. It is slavish, pervasive and pernicious; and it is doing great harm to our academic communities by not encouraging other types of scholarship that contribute significantly to excellence and innovation.

Colleges and universities identify themselves in a particular way: I'm a "Research I University" one says. "I'm a liberal arts college," says another when, in fact, each contains elements of the both. This taxonomy is convenient, but it is more imagined than real: faculty

move in and out of multiple scholarship activities throughout their careers and, assuredly, different types of scholarship exist on almost all of our campuses.

We need to recognize the fluidity of faculty life and the different modes of scholarship that exist on our campuses. Until we do, credentials will continue to trump talent and we will not live up to the fullness of our potential for innovation.

This will be a Herculean task because faculty structures remain rigid and hierarchical and faculty handbooks are protectionist.

Fourth, stop our small minded and self-defeating devotion to the ranking systems and start paying attention to what really matters.

Colleges, by and large, spend too much time seeking answers to the question “How do we not get left behind?” rather than “How do we get better at what we do already do well?” This is what went horribly and embarrassingly wrong at the University of Virginia (UVA) a couple of years ago when an anxious governing board asked the former rather than the latter question. It was fear, not strength that motivated a few members of the UVA’s governing boards to dismiss its president without discussion or debate. It was not her performance that put this public relations catastrophe into motion, but rather the fears of a handful of Trustees, who persuaded their colleagues to embrace the fear that they themselves felt. This is where the Board of Visitors got it wrong.

Rankings now proliferate, some of them, encouraged by lazy and uninformed media outlets, are so downright silly and wrong headed in their use or misuse of metrics that I wonder why we pay any attention to them at all. For instance, rankings that rely on salaries and future earning potential as a marker of a successful college degree, fail to understand that none of these are markers of what students have actually learned or the quality of that learning, nor do they allow for career paths that may provide a high degree of satisfaction, but not necessarily high earning power.

U.S. News and World Report rankings are a wealth and beauty contest, privileging wealthy and high-brand institutions, while undervaluing those that are providing an excellent education for diverse groups of students with fewer resources. Do you know how many national liberal arts colleges have been included in the top ten of *U.S. News and World Report* rankings in the last two decades? Eleven. That’s it. Eleven of the several hundred that exist, and those eleven – you guessed it - are among the wealthiest of the liberal arts colleges.

Too many of our institutions create programs and make decisions based on their desire to climb the rankings ladder at the expense of excellence and innovation. Rankings are diversionary, distracting institutions from their core mission.

Fifth, remove the administrative barriers that stunt innovation.

It takes a college forever to get anything significant done because we have erected administrative silos that protect tradition rather than inspire new ideas. Colleges and universities do not value and have not adopted the cross functionality that is common place outside of our ivied walls. And yet, both experience and research have shown that cross -functional collaboration, diversity of ideas and proximity to those ideas, drive innovation.

Because we tend to value credentials more than we value talent, we underutilize the talent that exists on our campuses. Last year, recognizing the pervasive entrepreneurial culture so evident on college campuses these days, I asked two undergraduate students to design an accelerator program that would provide support and resources for students who wanted to start their own businesses. I hired them as paid consultants and they produce a plan to create an accelerator program in less than four weeks. After a brief period of testing and refinement by administrative officers and a presentation to the Board of Trustees, the program was launched four months later. By accessing talent – in this case, two students – outside the normal administrative structures, we were able to achieve our objectives in a much shorter period of time, if we had relied solely on traditional administrative structures. Working outside the administrative boundaries that tend to protect turfs and validate specializations, produce very good results.

Time in service (a proxy for experience) has real value in any organization. However, when one considers the tender age of the young entrepreneurs who have founded highly successful businesses and the legions of young people they have hired to build their businesses, one cannot help but wonder what would happen if our college campuses were more intentional and strategic in harnessing the talent of our students and recent graduates. What would happen if we were brave enough to value talent, no matter the age or time in service, to add real value to our workplace?

I am convinced that we need more of this on college campuses.

We still do most of our work in offices – in other words, in isolation, like some modern day Bartleby the Scrivener. I recognize, of course, the essential value of cloistered work spaces in the contemplative and research environment where one needs offices in which to write and think and advise students.

However, we need more spaces – let's call them creative hubs - that bring people – faculty, administrators and students alike - together in more open spaces where conversation, play, problem solving and generative ideas can be nurtured. Architecture shapes and gives meaning to our work. In these cross-functional laboratories of innovation, people would be rewarded for their

contribution to innovation and creativity, for their willingness to experiment and take risks. This type of architecture has brought enormous success to businesses outside of higher education and there is no reason why we shouldn't adopt them on our campuses.

Finally, bring back the generalists and create more jobs with functions that change, evolve and are capable of reacting quickly to what is most needed at any given time. The propensity to specialize is understandable. It authenticates our work and rationalizes our reward system. And while some level of specialization is required to do our work well, we need more generalists than now exists on our campuses because generalists bring a broader and more catholic perspective to solving problems and creating new ideas. We have, to quote the poet, refined ourselves out of existence.

It is my hope that these five ideas will advance a national conversation about how colleges and universities might go about reducing the barriers to the change that drive innovation. Are we capable of positioning our institutions of higher learning to be nimble and responsive in the face of the technology revolution and the significant external threats that confront us?

I hope so. However, I know that change will not come until we fundamentally change how we do business. I also know that technology will not save us. It is a tool. An important tool, no doubt, but a tool nevertheless.

"Make no small plans because they do not have the magic to stir [people's] blood and probably themselves will not be realized. Make big plans; aim high in hope and work." So said, Daniel Burnham, the great American architect and urban planner.

Big ideas inspire people to their very best work. Our American colleges and universities have a long way to go before we realize our best work. But first we must have the courage and vision to step outside the self-constructed barriers – faculty and administrators alike- and narrow rooms of thought that impede innovation and stand between us and real progress.

Thanks for listening.

Lee