The Challenge of Innovation

A Call for Risk-Taking in Academia

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T he Internet may come to pose no more threat to traditional face-to-face delivery of higher education than did any number of new dot-com companies prove to pose to their brick and mortar progenitors. However, in the area of continuing education, graduate and professional education, corporate training, and a need to meet growing global demand far exceeding the capacity of traditional delivery systems, our colleges and universities may not be best positioned to take advantage of new online technologies and retain their role as market leaders. Other industries provide ample evidence that this might be just the situation facing colleges and universities in the next 20 years.

Innovation often thrives on a new disruptive technology—one that changes the fundamental operating assumptions of an industry. But organizations that create disruptive technologies often fail to capitalize on them and, worse, often fall victim to them in the hands of others.

This was the case with the failure of innovative, well-run minicomputer manufacturers like Digital, Prime, Data General, and Wang Laboratories, all of which failed to launch successful lines of personal computers. It was the case with PC manufacturers who aggressively invested in handheld computing years ago and yet today offer little competition to wildly popular Palm products. It was the case at the turn of the century with sailing ship builders who never became important builders of steamships.

Higher education—one of this country's most successful industries in terms of diversity of offerings, overall quality, international reputation and hold on market—is facing dramatic shifts. Its market is changing. A *minority* of students fit the 18 to 21 year-old residential profile of past years. The global demand for higher education is profound, but many nations lack capital resources to recreate or buy into

our traditional systems of instruction. New technologies are redefining when and where learning takes place, exemplified in distance learning. New providers of instruction such as the University of Phoenix, Jones University and Harcourt Higher Education are entering the marketplace. Most importantly, the value criteria the public is applying to higher education is shifting, with affordability, convenience, just-in-time relevancy, lifelong learning and vocational application becoming increasingly important.

Much of this change is made possible through the Internet, perhaps the ultimate disruptive educational technology. Yet while colleges and universities have all the internal knowledge and skills necessary to successfully innovate with Internet technologies, many fail to do so. The lurching launch of the Western Governors' University and the failure of the California State University's online college speaks to the great difficulty that large, well-equipped institutions are having in making the shift to online education. The high cost/low revenue aspects of other attempts do not bode well.

This is not a crisis of leadership in higher education. University and col-

lege presidents and their staffs are as acutely aware of technological change as anyone. But they labor under a handful of principles that work against effective innovation.

First, a college's ability to procure tuition dollars and charitable contributions dictates its overall financial success. As a result, institutions become very good at killing ideas that their students and donors don't like. This is why boards of trustees, heavily loaded with wealthy and often nostalgic alumni, exert such a powerfully constraining influence on many institutions. It is also why the best-endowed, most powerful and established institutions produce excellent research in *sustaining* technologies, yet community colleges, with tiny endowments and little or no dependence on tuition dol-

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lars, have been the great innovators in teaching and learning.

Second, disruptive technologies often allow new markets to emerge and provide opportunity for those who are willing to serve them. (Indeed, success with innovative and disruptive technologies often depends on starting with a market you do not already serve providing less revenue than the established market.) But those markets

rarely fit the economics of large, well-established institutions. Any administrator would love the idea of offering a $90,000 MBA like Duke's hybrid distance learning degree. But how many institutions can sustain a substantial commitment to an underserved population such as senior citizens?

Third, while market research and good planning are the hallmarks of effective management, genuine innovation and the accommodation of disruptive technologies defy such practice. Research and planning are critical to sustaining successful innovation, but they have a long history of dismal failure when it comes to making breakthrough use of technology. Institutions and foundations interested in this level of innovation must accept a high level of unpredictability in the strategies and programs that will lead to success.

Finally, and perhaps most threateningly, disruptive technologies are disruptive because while they start small and with underserved markets, they subsequently become fully performance-competitive with the mainstream. Indeed, the evidence strongly suggests that disruptive transformational change almost always *begins* with nontraditional markets. Adult education started as an ancillary revenue generator for colleges and universities more than 25 years ago and adult or nontraditional age students now dominate the college market. Marlboro College has taken only two years to graduate as many students from its online programs as it does from its traditional residential college.

None of this suggests that institutions of higher education should act more like businesses. It does suggest, however, that institutions of higher education and private foundations—among the principle investors in innovation—learn some lessons from the great companies that have failed when confronted with new technologies.

First, make forays into new technologies and new markets fast, inexpensive and flexible. These three qualities fly in the face of academic tradition, but disruptive innovation means taking multiple tries at the target, learning with each iteration, expecting failure, and adjusting quickly. The cost of each try needs to be modest so that the overall effort can be sustained. This suggests a very different funding model than the one currently used by foundations and universities.

Second, don't shy away from new technologies that seem inadequate today. We know that the curve of technological improvement often exceeds the curve of user demand. For example, the online tools of five years ago were inadequate for creating rich, virtual learning environments. Today, distance learning can provide wholly online instructional experiences as rich and fulfilling and effective as traditional face-to-face classrooms. Different, no doubt, but better in many ways in terms of cost, convenience, and customization.

If private foundations are to play a role in changing the conditions that engender successful innovation, they should become more comfortable with risk and failure. They should make more modest investments, but commit to sustained investment over time contingent on incremental learning by the institution and small successes. They should set the funding agenda less narrowly than many of them do now. In particular, if they want to support disruptive innovation, they should welcome initiatives that target new markets and nontraditional customers. They should be wary of proposals that promise disruptive innovation within established institutions for traditional customers.

For their part, colleges and universities should not overstate their case,

suggesting that the idea for which they seek funding is fully thought out, tested, a sure success, and the *only missing piece* is the necessary funding; that the funded initiative will be *transformative* on their campuses; and that once successful there, the model will be *transportable* and *scalable* for campuses across the country—in short, that it will transform all of higher education. These claims are often made, or at least implied, and they never happen this way. Disruptive innovation doesn't happen this way either.

Instead, institutions making a case for funding from a foundation should bring forth a modest proposal, establish its process for agile recalibration and avoid trying to effect such innovation within its core organization or for its traditional, already well-served markets.

This last point is critical. Colleges and universities need to insulate their innovators from the mainstream organization, at least in the early stages. The cornerstones of quality in established institutions—traditional governance structures, curriculum committees, careful and critical consideration of the new, the apprenticeship system of graduate teaching and then faculty ranks—will impede their efforts.

The Ivy League bastions of Harvard and Yale and such Potted Ivies as Amherst and Williams may dominate our collective mythology about American higher education and inform novels and films, but they are hardly representative. Higher education in America is primarily land-grant universities, state colleges, huge community college systems, and small, struggling liberal arts colleges. None of them can remain sanguine in the face of disruptive changes in higher education. But all of them, with those who invest in them, can create a context in which they become innovators.

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