

Changing

The purpose of education is to make the individual want to do what he has to do. —Plato

EXACTLY ONE HUNDRED YEARS AGO, an idealistic young writer began work on a marvelously ambitious trilogy. The author was Frank Norris, the first serious novelist in California's then brief history as a state in the American Union. The opening novel of his trilogy, published in 1901, was the epoch-making *The Octopus*. That title referred to the Union Pacific Railroad, whose iron tentacles then seemed to be entangling all of California. Norris's real subject, however, was signaled by the rarely remembered title that he gave to his unfinished trilogy as a whole. He called it *The Epic of Wheat*, and he intended it to lay bare the transformation of family farming in the Golden State into what we now call *agribusiness*.

That metamorphosis grew out of the harsh and even bloody interaction between the age-old localized activity of farming and a radically new delivery system for agricultural products: the railroad. The transformation, as Norris presented it, did not make a pretty picture, but it made an undeniably exciting portrait. The railroad was a thrilling, world-changing new technology. Yes, once you were caught in its octopus tentacles there seemed no escaping it; but if some feared that embrace, many more were intoxicated by it, and benefited greatly from it.

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Landscape

From Cottage Monopoly to Competitive Industry

By Barry Munitz



A century after Norris, we are witnessing an emerging and perhaps equally harsh interaction between the age-old localized human activity of teaching and learning and a radically new delivery system for instruction: the technology-driven Internet. An education landscape now figuratively in the hands of thousands of “family farmers” will be transformed substantially, though not entirely, by interactive digital technology into a fiercely competitive knowledge industry. Teaching and learning will still be heavily influenced by our traditional institutions, but these colleges and universities will no longer dominate the landscape, and they will be seriously challenged by a sharply reduced number of dramatically enlarged competitors. The ubiquity of digital technologies, the emergence of new institutional players, the altered expectations of the employee workforce, and the changes in the student market will all be catalysts in the transformation. The ultimate question is how institutions of higher education in the United States will evolve in this emerging environment of corporate and technological competition and whether they can find a way to prosper alongside new educational delivery systems that are designed specifically for an evolving culture of individual empowerment and learning on demand.

The Changing Academic Landscape

By every demographic measure, higher education is destined to be one of the growth industries of the next several decades. Currently, the 3,700 institutions in the United States enroll about fifteen million students. The traditional age cohort is expanding (perhaps adding as many as two million students over the next decade), but even more important, older and employed learners will add more than twenty million students to the enrollment pool.

There have been surprisingly few fundamental shifts in the nature of American higher education over the past 250 years. The rare colleges in prerevolutionary New England focused on a relatively small number of young men, who either were progressing along a gentleman’s path toward their fathers’ professions or were training for the clergy. During the Civil War, as the Morrill Act brought to the industrial revolution the concept of land-grant public universities, we took a major step into the world of access and toward the link between economic stability and post-high school curriculum. The

context was midwestern and rural, and the expansion was dramatic.

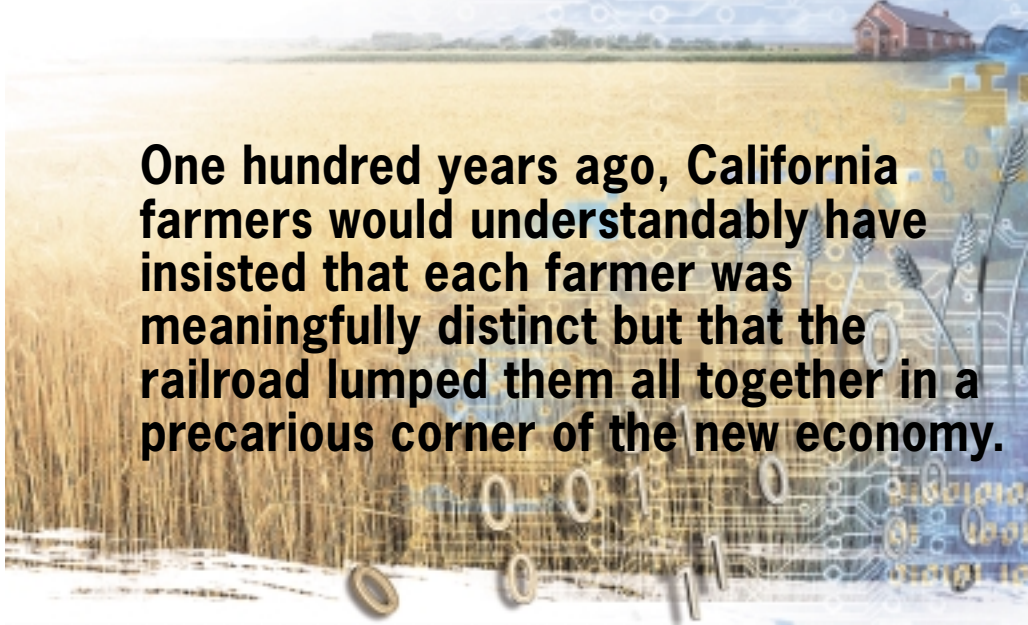
When we entered the twentieth century, the European model of graduate education and research began to influence a number of our universities, and the postbaccalaureate chapter of our higher education system began. The last major shift was signaled by the approval of the post-World War II GI Bill, which—combined with the explosive growth of community colleges—changed the way we viewed educational opportunity past high school for most of young America.

As the twenty-first century approaches, information technology has joined with electronic communication to diversify even further the provision of academic services. Even as students of all ages and at all stages of life are discovering that the community of organizations offering advanced training and strong credentials represents the gatekeeper for socioeconomic mobility in the United States, we are witnessing the birth of alternative educational channels beyond high school. We are suddenly confronting an extraordinary range of full- and part-time, on-site

and at-distance, in-person and machine-driven teaching and learning experiences that constitute an array of quality training previously unknown anywhere in the world. However, whereas private and non-traditional K–12 schools often combine the greatest prestige with the most innovative and nontraditional educational values and techniques, the most honored colleges and universities in this country tend to have one single criterion for accruing respect and reward, and they are usually the most conservative in their expectations and their values.

Several years ago at a National Business–Higher Education Forum seminar, I moderated a conversation between the heads of two complex and notoriously creative corporations and the presidents of two superb and highly respected American universities. When pressured repeatedly about their unwillingness to acknowledge the desire or the need to make any fundamental change at their institutions, or others, the university presidents vehemently emphasized that since their institutions were the envy of the world, desired by many more than those who would have the privilege of engaging with them, capable of dramatically increasing price and capacity without any noticeable impact on product, the presidents were amazed and bemused by the corporate executives’ expectation that they should make fundamental adjustments at their institutions. One of the two for-profit chief executives then said quite firmly, “Mr. President, with all due respect, your comments remind me of precisely the substance and the tone of repeated assertions I heard in our automotive company’s cafeteria one month before countries in the Far East announced their interest in manufacturing automobiles.”

Reading David Halberstam’s *The Reckoning* provides quite painful insight into the potential implications of this remark, as does any recent study of health care. Although many of the traditional U.S. institutions of higher education are better than ever,



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and by most measures they are fully deserving of their status and their support, the parallels with those other economic and social functions in which the producers, rather than the consumers, once defined the nature and the delivery of the product would indicate that many of our nation’s colleges and universities are in for challenging times in the next decades.

Increasingly, employed workers will require additional education to keep pace with the rapid changes in the work environment. We no longer speak of a single career but rather of a series of jobs in a career portfolio. As Stan Davis and Jim Botkin put it in their book *The Monster under the Bed*, “If you are not being educated in your job today, you may be out of a job tomorrow.”¹ Howard Gardner, in his marvelous new book *The Disciplined Mind*, describes the characteristics that employers look for in current job-seekers: “An individual must be highly literate, flexible, capable of troubleshooting and problem-finding, and, not incidentally, able to shift roles or even vocations should his current position become outmoded.” Gardner elaborates on the skills that our next generation must possess in order to be successful in life and at work, and he issues a sharp warning to established campuses: “Every culture must make sure that its younger individuals master certain areas of knowledge, acquire certain values, master certain skills. It is important that youths develop intellectually, morally, socially, emotionally, and

civily. Certain educating bodies are available, including parents, peers, teachers, masters, relatives, the media, schools, and various forms of technology . . . if schools do not change quite rapidly and quite radically, they are likely to be replaced by other, more responsive (though perhaps less comfortable and less legitimate) institutions.”²

In a speech at Claremont Graduate University, Jules LaPidus, longtime head of the Council for Graduate Schools, spoke of the technological revolution and worried aloud about its impact on the development of education. He added, “Clearly, we have separated the development of content from the development of delivery.” He quoted technology columnist Michael Schrage, who at a recent meeting had stated: “The digital technologies restructuring enterprise and academe are far less about the creation and arrangement of new information than the creation and management of new relationships.” To Schrage’s observation LaPidus added: “Each passing day seems to corroborate that insight particularly as we try to comprehend the role of the Internet in education. Unfortunately, much of the discussion of the uses of information technology in teaching and learning appears to be focused on its use as a delivery system for content rather than on how it will alter and improve the ability of people to learn.”

Established academic institutions are virtually all bounded by time and

place. The instructional, social, and administrative functions occur during face-to-face interactions in physical settings. All institutions are capital and human intensive in terms of the resources required to maintain them. Although some campuses have demonstrated a capacity to address new social and economic conditions, at their core all the institutions look pretty much alike (i.e., a credit-for-contact system of classroom-bound lecture, discussion, and print-oriented instruction) when contrasted with the nascent competition. One hundred years ago, California farmers would understandably have insisted that each farmer was meaningfully distinct but that the railroad lumped them all together in a precarious corner of the new economy.

As we enter a digital age, we will find that our concepts of both the campus and its infrastructure must be radically altered. Suddenly, and with apologies to Gertrude Stein, there is “no there there.” Boundaries and the physical artifacts we associated with them are dissolving. Infrastructure will be defined more in terms of fiber and electronics than land and buildings; institutions are being transformed into “learning environments” that are independent of both time and place. The traditional places that survive well into the next century may, in the words of John Seeley Brown and Paul Duguid, “look” the same as they did in the past but may “be” very different.³ At the same time, they will be quite different from the new competitors in both appearance and reality.

New Competitors

The new competitors—the edubusiness institutions—do not play by the same rules, honor the same traditions, or use the same tactics as do traditional educational institutions. Nor do they form a homogeneous group. We should not be surprised by any of the newer models, although some were easier to predict. Currently, they can be categorized into four sectors.

One sector comprises overcrowded, credential-driven programs

virtually guaranteed to attract focused time and considerable money. These programs see a large and growing market in a convention-bound industry that looks like easy pickings. Their weapon of choice is corporate know-how, and they are nationally rather than regionally located. The University of Phoenix has 57 learning centers in 12 states and enrolls 48,000 degree-credit students.⁴ Chicago's DeVry Institute of Technology has 15 campuses in the United States and Canada and enrolls 48,000 students in business and technical programs. ITT

combine refined technical developments with tested corporate priorities to invade territory that heretofore has been tenaciously protected by the establishment. There are eleven such institutions worldwide, although not one has as yet conducted major activity in the United States. (However, Great Britain's Open University has recently set up shop in several states under cooperative arrangements with U.S. institutions.) These mega-universities share several characteristics. They are very large, reflecting the volume and variety of demand for educa-

education business, and literally everyone in the information and technology industry is in the bit business: hardware and software producers and distributors; network and telecommunications providers; publishers; marketing agencies; entertainment companies. All of these players are in a position to contract with faculty and form broad-based strategic partnerships to produce, market, and distribute franchised, commercial courseware.

These four sectors of new competitors raise serious questions about traditional concepts of academic quality, accreditation, intellectual property, faculty roles, shared governance, social equity—indeed, even about the value and meaning of a degree itself. The commercialism inherent in much of the new education market reveals the need for a reexamination of fundamental issues regarding the culture and values of the academic enterprise generally. Even the College Board has recently announced its new for-profit testing center.

It is most interesting, therefore, to observe how many of our existing colleges and universities are responding to these emerging strategies and demands. Of course, most universities have had distance or extended education programs for decades, although nothing on the scale of a mega-university. Some of the largest and best have included Penn State, Stanford, the University of Wisconsin, SUNY, and UCLA. But there are at least two new elements. First, many institutions are supplementing earlier, not-for-profit investments in distance learning with for-profit ventures. Second, the scope and the reach of their delivery systems are being expanded, particularly via the Internet, for national and worldwide audiences. So American institutions seem to understand the nature of this challenge, and are beginning to respond to it, but their competitive landscape and their strategic advantages are being redesigned, beyond their historical control.

As I am writing, the October 18, 1999, *Business Week* has just arrived, with a lengthy special report on

“Executive Education.” Here are excerpts from the introduction:

But if technology is driving the demand for executive education, it's also revolutionizing the way it's delivered. . . . That's why this year, for the first time ever, BUSINESS WEEK's executive education survey includes the key private and nonprofit companies in the market, along with our traditional B-school universe. Although still influential, B-schools are no longer the only game in town. . . . Overall, spending on U.S. corporate training and education for managers rose to \$16.5 billion, up 17% from last year. . . . Asked for the first time who is the most effective provider of executive education, some 53% of those surveyed said that consultants were tops. Only 39% said the same of B-schools. It's a dramatic statement by companies, who are increasingly looking for the same bottom-line results out of their educational spending as they expect out of any other investment.

The top-rated program for emphasis in “Leadership” was the for-profit Center for Creative Leadership. In the sizzling market for services designed to meet a corporation's particular requirements, the number-one rating went to AchieveGlobal, a private company owned by Times Mirror Inc.

A Walk on the Wired Side

Today it is estimated that there are about fourteen million Internet users under the age of eighteen in North America. That number is projected to grow to thirty-seven million over the next five years (keep in mind that almost every prediction concerning Internet growth has been far too low). About 70 percent of U.S. college students own a personal computer, and almost 100 percent use the Web to some extent.⁶ Obviously, utilization varies widely—from entertainment and games to e-mail and chat, to shopping, and to school-related research and homework. The important point is that these young users are “connected” to a web of people and information that surpasses anything previously seen in human history. They are

confronting classrooms where, for the first time, the pupils are often better than the instructors at using the delivery system.

These members of the “net generation” think of themselves more as producers of information and less as consumers of it.⁷ They are not content to assimilate information passively but are used to interacting with it, responding to it, and giving it new shape and meaning. They tend to be fiercely independent and yet socially aware and involved. They live in a fast-forward environment that gives profoundly different meaning to old phrases like “immediate gratification” and “low-attention span.” There is a sense of empowerment, self-reliance, skepticism, and even arrogance about their approach to information, compounded by their strong alienation from virtually all forms of institutionalized authority—religious, political, or educational. They find so much information available at such low cost that they tend to assign it little long-term worth. These students are not just fiercely independent in their formative, frontier years but are also hostile to any form of centralization or regimentation that hampers flexibility. Perhaps these tendencies will moderate once that culture matures, ceases to be defined by early adopters, and becomes more representative of the general population. The likelihood is not great, however. Included in the socializing, culture-making experiences of this generation are all forms of new media, every digital gadget that comes to market; all members of this generation are increasingly linked into mobile, interactive, and multimedia networks. When these younger forces combine with those of their elders who are seeking vocational upgrades or restarts, or who simply share their love of new toys and fads, the learning and playing marketplace will explode.

Successful participants in the emerging knowledge industry will recognize that distinctions between education and the world of work, or between instruction and the world of

leisure and entertainment, are increasingly artificial. The process of learning—the where, when, and how—can be as varied as the individuals involved. Most important are the content, quality, pace, and amount of learning and the depth of understanding and creativity that it can produce. Properly employed, these new technologies can be superb integrators; they are as ubiquitous as the ATM and as easy to use as the telephone. The successful educational institution will use the new technologies to integrate the worlds of education, work, and leisure. As a result, the expectation for a unique, scheduled, and separate educational activity will dissolve into the idea of something that is delivered and acquired in an “anytime, anyplace,” on-demand fashion.

Earlier I mentioned the most recent book by Howard Gardner, one of our most creative thinkers about that wondrous world where education, technology, and culture collide. Toward the conclusion of his book, Gardner speculates about the magnet drawing our for-profit universe to the academic marketplace:

For the first time it is possible via technology to teach individual students in the ways that they learn best; to fashion future instruction based on the record of earlier successes and failures with those students; and to allow them to show what they have learned in ways both comfortable for them and susceptible to external evaluation. The technology to do this can be conceived but it has not, to my knowledge, been realized. . . . The challenge is to create pedagogical and curricular interfaces that mobilize the genius of the technology and the curiosity of children in the service of deeper understanding. Here is a perfect opportunity for business to do what it is suited to do. Such a mission also provides the right flavor of collaboration among educators, researchers, designers, and individuals in marketing and sales. Profits might not come instantly, but the first technologies that can demonstrably improve the learning of mathematics or history or genetics in a non-hothouse atmosphere will attract consumers from all over the planet.

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Educational Services, based in Indianapolis, enrolls 25,000 students at its 62 institutes.

A second sector is composed of companies that have simply decided to design and deliver their own training and upgrading programs on-site, with internal and consultant expertise. Quite often the programs of these companies—from Motorola to McDonald's—have become quite complex. By 1997 there were almost as many of these new-style corporate “universities” in the United States as there were public postsecondary institutions. Over the past twenty-five years, this sector of postsecondary education has enjoyed growth of 1,000 percent.

A third sector of this newer educational economy recognizes no geographic boundaries or even national sovereignty. These institutions depend on distance learning strategies that have evolved over decades. They

tion. They use some combination of high-tech and high-touch technologies and increasingly lean on digital innovations. They are cost-conscious, focus on the instructional core, link the educational experience with the job market, and have quality controls based on learning outcomes. Perhaps most important, many are modeled on the competitive and managerial practices of successful corporate organizations, as described by Michael Porter and others.⁵

Whether for-profit or not-for-profit, the institutions in the fourth sector operate almost exclusively through the wires and the airwaves. These purely electronic providers have the greatest capacity of all to compete on an “anytime, anyplace” basis, and they are particularly bemused by earlier assumptions about accreditation. These new competitors contend that anyone who is in the “bit business” can get into the

With a massive cultural sanction, schools have been licensed to tell students what they should learn, and students have not been licensed to decline the guidance. In no market economy does the vendor tell the customer what the customer will buy. Rather, the customer tells the vendor what he or she wants, and the vendor either provides it or goes out of business. For perhaps a longer time than most of us would care to admit, student customers have become increasingly unhappy with the mix of subjects that schools have required them to “buy” and with the way the subjects are provided. For better and perhaps very significantly for worse, the anarchic, asocial worldview that the Internet promotes is accelerating the transformation from a command to a market economy. If the way in which our schools, colleges, and universities respond to this challenge from the nation’s students, parents, employees, and employers is not more imaginative and more successful than how nineteenth-century farmers responded to the railroad and the distribution conglomerates that followed, then our higher educational institutions face a very tough future. The phrase “losing the farm” has entered American English because many families did lose their farms in the course of this transformation. But agribusiness has not been the end of agriculture, and edubusiness will not be the end of education. Schools are not only businesses; they are *also* businesses, and they will not serve their cherished traditions well by being driven out of business. The challenge, as in all such transitions, must be to adapt without simply assimilating, to learn new skills without forgetting old goals.

Conclusion

Meyer Feldberg, dean of the Columbia Business School, recently acknowledged: “We have been functioning and operating in the ultimate elitist environment for 1,000 years. [The Internet] is the instrument for democratizing intellectual capital.” Information and learning are the

basic raw materials of a knowledge society, much as human labor and manufactured goods and services provided the needed resources for earlier, industrial eras. Our ability to compete worldwide now depends on intellectual resources. Education cannot stand apart from the secular trends of everyday life—in the arts, politics, and business. The digital revolution is only partly technological; it is also cultural, and therein lies both the threat and the promise for today’s institutions of higher education as they make hard decisions about mission, clientele, priorities, and money. At the center of each decision stand the changing needs of an information economy, the new organizational and managerial models from the private and public sectors, the sophisticated learning tools and delivery systems of the digital revolution, and a plethora of learner lifestyles all steeped in the values of consumer-driven choice and convenience.

My dear friend Joel Fleishman, who is teaching and practicing the transformation of academic and philanthropic America, has been corresponding with me about the risks and rewards of technological innovation. He suggests that the key to the intelligent management of this new magical capacity to produce desired information instantly is the same key used successfully in dealing with other major gifts and temptations: “moderation and discretion.”

There are millions of people being brought closer together by these technologies every day. Minorities—intellectual, political, ideological, and all the rest—are vastly strengthened by their capacity to reach out to other like-minded people across countless miles and live a richer, more meaningful life because of those technologies. The technologies also significantly increase knowledge about politics and public policy, whatever their harmful effects may be on the character of political discourse. . . . The cascading technologies seem to be far more a blessing than a curse. The opportunities that they open up for millions of people are much more enriching than they are impoverishing. Whatever costs they

extract can be compensated for in other ways. All that is required is an intelligent, cautious, disciplined way of using them.

Were Frank Norris writing one hundred years later, contrasting the impact of computer networks on schools as he did railroad networks on farms, the same fears and warnings would emerge. But just as the truck and the plane made Norris’s villain look tame, so will unforeseen developments further transform the role that information science plays in our teaching and learning systems. Some form of classical university has survived for two and a half millennia, whereas virtually every other social institution has been broken or severely modified. New competitors for the market served by our historically decentralized, nonprofit colleges and universities have arisen with awesome speed and force—driven by the same digital innovations and consumer transformations that are reshaping so much else in society. Coexistence and recombination of the traditional institutions and the new competitors now seem inevitable, but with functions and formats still to be determined. Those institutions, old and new, that understand our underlying needs and values, and that exercise the ingenuity and courage to break down traditional patterns and boundaries, will design and ultimately control our educational future.

Notes

1. Stan Davis and Jim Botkin, *The Monster under the Bed* (New York: Simon and Schuster, 1994).
2. Howard Gardner, *The Disciplined Mind* (New York: Simon and Schuster, 1999), 101.
3. John Seeley Brown and Paul Duguid, “Universities in the Digital Age,” *Change*, July/August 1996, 10–19.
4. This statistic, and those immediately following on edubusiness institutions, are drawn from an unpublished white paper by Merrill Lynch, “The Book of Knowledge: Investing in the Growing Education and Training Industry” (1999).
5. For Michael Porter’s three books *Competitive Strategy*, *Competitive Advantage*, and *The Competitive Advantage of Nations*, see the boxed-set edition (Detroit: Free Press, 1998).
6. These data are from sources cited in the “Numbers” section of *Business* 2.0, September 1999, 190.
7. For one of the most comprehensive treatments, see Dan Tapscott, *Growing Up Digital: The Rise of the Net Generation* (New York: McGraw-Hill, 1998).