

The Navigation of Universities through a Flat World

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Abstract

The imperatives of a global, knowledge-driven economy are changing both the higher education needs and expectations of society. This presentation will review the major forces driving change in our world and the challenges and opportunities they present to higher education, for example, balancing the needs for broadening educational opportunity with the achievement of world-class excellence in research, maintaining adequate support for higher education in the face of the priorities of aging populations, the conflict between the demands for greater public accountability and institutional autonomy, and sustaining public trust and confidence in the university as a vital social institution. Some attention will also be given to possible paradigm shifts in higher education, including lifelong learning, the emergence of global universities, exponentially evolving technologies, and the rapidly growing open education resources movement (e.g, OpenCourseWare, Google Book Search, and ubiquitous cyberinfrastructure). Finally, the presentation will draw from recent experiences in the United States to illustrate the implications of this changing environment for the governance and leadership of higher education at the national, regional, and institutional level.

Introduction

This afternoon my assignment is to discuss some of the forces driving change in our world and how they might affect both the governance and leadership of our institutions. When Columbus returned to Barcelona in 1493 from his voyage to the New World, his navigation had demonstrated that the world was indeed round. Yet, New York Times columnist Thomas Friedman suggests that in our times the powerful forces of globalization, demographics, and an economy increasingly driven by knowledge and innovation have flattened our world, leveling the playing field for the participation of billions of people once excluded from the industrial economy. Since these challenges are well known to you, I will only review them briefly before moving on to discuss their implications for higher education. (Friedman, 2005)

The Forces Driving Change in Our World

The Knowledge Economy

Today, our world has entered a period of rapid and profound economic, social, and political transformation driven by the emergence of a radically new system for creating wealth that depends upon the creation and application of new knowledge and hence upon educated people and their ideas. It has become increasingly apparent that the strength, prosperity, and welfare of a nation in a global knowledge economy will demand a highly educated citizenry enabled by development of a strong system of education at all levels. It will also require institutions with the ability to discover new knowledge, develop innovative applications of these discoveries, and transfer them into the marketplace through entrepreneurial activities. (Drucker, 2005)

Globalization

The National Intelligence Council's, *Mapping the Global Future, Project 2020* predicts that: "The very magnitude and speed of change resulting from a globalizing world—apart from its precise character—will be a defining feature of the world out to 2020. Globalization—the growing interconnectedness reflected in the expanded flows of information, technology, capital, goods, services, and people throughout the world—will become an overarching mega-trend, a force so ubiquitous that it will substantially shape all other major trends in the world of 2020." (National Intelligence Council, 2004)

Markets characterized by the instantaneous flows of knowledge, capital, and work and unleashed by lowering trade barriers are creating global enterprises based upon business paradigms such as out-sourcing and off-shoring, a shift from public to private equity investment, and declining identification with or loyalty to national or regional interests. In parallel with these trends, there is a strong sense that higher education is also in the early stages of globalization. Of course there has long been a tradition of international higher education through the exchange of students, faculty, and ideas and the development of international partnerships among institutions. Yet, globalization implies a far deeper interconnectedness with the world—economically, politically, and culturally.

Demographics

The populations of most developed nations in North America, Europe, and Asia are aging rapidly. In fact, half of the world's population today lives in countries where fertility rates are no longer sufficient to replace their current populations. Over the next decade the percentage of the population over 60 will grow to over 30% to 40% in many of our nations. Such aging populations not only have serious implications for workforce development, they may also threaten the public support of higher education since aging populations tend to shift public priorities away from investment in the future, that is education, and instead to the needs of the elderly—e.g., retirement security, health care, safety from crime, and tax relief.

Growing disparities in wealth and economic opportunity, frequently intensified by regional conflict, continue to drive population migration presenting challenges to many nations. The burden of refugees and the complexity of absorbing immigrant cultures are particularly apparent in Europe and North America. Again, some datapoints illustrate the challenge. In the United States, immigration from Latin America and Asia is now the dominant factor driving population growth (53% over the past decade), with the U.S. population projected to rise from 300 million to over 450 million by 2050. Here I should note that Spain is second only to the United States in numbers of immigrants, from Africa, Latin American, Asia, and Eastern Europe. (National Information Center, 2006)

By the year 2030 current projections suggest that approximately 40% of Americans will be members of minority groups; by mid-century we will cease to have any single majority ethnic group. While such immigrants bring to America great energy, talents, and hope, this increasing diversity is complicated by social, political, and

economic factors. The full participation of immigrants and other underrepresented ethnic groups continues to be hindered by the segregation and non-assimilation of minority cultures and a political backlash against long-accepted programs designed to achieve social equity (e.g., affirmative action in college admissions).

The Flat World

Friedman has captured the implications of the global, knowledge- and innovation-driven economy by suggesting that: "The playing field is being leveled. Some three billion people who were out of the game have walked and often run onto a level playing field, from China, India, Russia, and Central Europe, nations with rich educational heritages. It is this convergence of new players, on a new playing field, developing processes for horizontal collaboration, that I believe is the most important force shaping economics and politics in the early 21st century." (Friedman, 2005)

Implications for Higher Education

The Changing Higher Education Needs of Society

The education requirements of the knowledge economy are intensifying: from secondary to tertiary to post-graduate to lifelong learning. Education is becoming a powerful political force. Just as the space race of the 1960s triggered by the launch of Sputnik stimulated major investments in research and education, there are early signs that the skills race of the 21st Century may soon be recognized as a dominant domestic policy issue. The National Governors Association notes that "The driving force behind the 21st Century economy is knowledge, and developing human capital is the best way to ensure prosperity." But there is an important difference here. The space race galvanized public concern and concentrated national attention on educating "the best and brightest," the academically elite of our society. The skills race of the 21st Century values instead the skills and knowledge of the entire workforce as a key to economic prosperity, national security, and social well-being. (NCSL, 2006)

Caught Between Massification and League Tables

In many respects the challenges facing higher education in developed nations (e.g., OECD) are quite similar and perhaps incompatible:

- The need to dramatically broaden participation in higher education to build a competitive workforce (massification),
- To build world-class programs in education and research to compete in a knowledge-driven economy (questionably measured by league tables),
- And to reduce the relative burden on taxpayers who face other public spending priorities such as health, retirement, and national security.

More fundamentally, in a knowledge-driven economy, many governments are increasingly viewing higher education primarily as a private benefit to students and other patrons of the university rather than as a public good benefiting all of society. It is ironic that this shifts the value proposition from that of government responsibility for supporting the educational needs of a society to university responsibility for addressing the economic needs of government—an interesting reversal of traditional responsibilities and roles. (Glion, 2008)

Mission Differentiation

It is increasingly apparent that the great diversity of higher education needs, both on the part of diverse constituencies (young students, professionals, adult learners) and society more broadly (teaching, research, economic development, cultural richness) will demand a diverse ecosystem of institutional types. Key is the importance of mission differentiation, since the availability of limited resources will allow a small fraction of institutions to become globally competitive as comprehensive research institutions. A differentiated system of higher education helps to accomplish both the goals of massification and quality, but assigns different roles in such efforts for various institutions.

Enabled both by continental scale and its decentralized nature, the United States has managed to achieve a highly diverse system of higher education. This has enabled it to focus on significant public and private resources to create a small set (less than 100) of world-class research universities, while distributing the broader roles of mass education and public service among a diverse ecosystem of public and private institutions, albeit with an inevitable tendency toward "mission creep".

Public Policy vs. Markets

These economic, geopolitical, and technological factors are stimulating powerful market forces that could drive a massive restructuring of the higher education enterprise, similar to that experienced by other economic sectors such as health care, transportation, communications, and energy. Nations are moving toward revenue-driven, market-responsive higher education systems because their current tax systems are increasingly unable to support the degree of universal access to postsecondary education required by knowledge-driven economies in the face of other compelling social priorities (particularly the needs of the aging). Furthermore, there is growing willingness on the part of political leaders to use market forces as a means of restructuring higher education in an effort to increase both efficiency and quality. Competition among universities has also raised an awareness of the need to provide both a greater degree of institutional autonomy to enable the agility, flexibility, and innovation required by today's fast-changing world. Put another way, market forces are rapidly overwhelming public policy and public investment in determining the future course of higher education. (Newman, 2004; Zemsky, 2005)

Higher Education in the United States, circa 2008

Higher education in the United States is characterized both by its great diversity and an unusual degree of institutional autonomy—understandable in view of the limited role of the federal government in post-secondary education. As *The Economist* notes, "The strength of the American higher education system is that it has no system."

This can be seen by comparing the various roles of the federal government, the states, and the private sector in the table below:

The role of the federal government (21%)

- No ministry, no national systems, no controls...no policy
- \$40 B student financial aid, \$30 B in research grants
- Supports people (students, scientists), not institutions

The role of the states (24%)

- \$75 billion/y to support operation of public universities
- Great diversity in state governance, from rigidly controlled systems (New York, Ohio) to strategic master plans (California) to anarchy (Michigan)

The private sector (55%)

- \$90 B student fees, \$30 B gifts, \$35 B endowment, \$30 B other
- Entirely market driven

Altogether, the United States spends \$330 B/y or 2.6% of GDP on higher education with a current enrollment of 17 million students.

Two caveats about these data are necessary here. These expenditures cover a broad range of non-instructional activities such as research and clinical care supported by independent revenue streams. When these are subtracted out, one arrives at an average instructional cost for American higher education at roughly \$10,000 per student per year, comparable to costs of several European nations. These tables also do not include the rather substantial subsidies of higher education through the foregone tax revenues ("tax expenditures") arising from the generous tax treatment of university gifts and endowment earnings as charitable gifts and nontaxable income, respectively, and estimated to be roughly \$20 B.

In summary, the key characteristics of higher education in the United States are:

- The great diversity among institutions and missions.
- The balance among funding sources (private vs. public, state vs. federal).
- The influence of market forces (for students, faculty, resources, reputation).
- Its global character (attracting students and faculty from around the world)
- The absence of a centralized system that leads to highly decentralized, market-sensitive, and agile institutions, students, and faculty.
- Supportive public policies (academic freedom, institutional autonomy, tax and research policies).
- The research partnership between universities, the federal government, and industry.

Again, to quote *The Economist*, "The main reason for America's success lies in organization. The federal government plays a very limited role. America does not have a central plan for its universities. Instead, universities have a wide range of patrons, from state governments to religious bodies, from fee-paying students to generous

philanthropists. Universities compete for everything, from students to professors to basketball stars." (*The Economist*, 2005)

Storm Clouds Gathering in the West

In recent years, numerous studies sponsored by government, business, foundations, the National Academies, and the higher education community have suggested that the past attainments of American higher education may have led our nation to unwarranted complacency about its future.

The National Commission on the Future of American Higher Education ("The Spellings Commission")

Of particular importance here was the National Commission on the Future of Higher Education, launched in 2005 to examine issues such as the access, affordability, accountability, and quality of our colleges and universities. (Miller, 2006) This unusually broad commission—comprised of members from business, government, foundations, and higher education—concluded that "American higher education has become what, in the business world would be called a mature enterprise: increasingly risk-averse, at times self-satisfied, and unduly expensive. It is an enterprise that has yet to address the fundamental issues of how academic programs and institutions must be transformed to serve the changing educational needs of a knowledge economy. It has yet to successfully confront the impact of globalization, rapidly evolving technologies, an increasingly diverse and aging population, and an evolving marketplace characterized by new needs and new paradigms." (Miller, 2006)

More specifically, the Commission raised two areas of particular concern about American higher education: social justice and quality. Too few Americans prepare for, participate in, and complete higher education. Notwithstanding the nation's egalitarian principles, there is ample evidence that qualified young people from families of modest means are far less likely to go to college than their affluent peers with similar qualifications. America's higher-education financing system is increasingly dysfunctional. Government subsidies are declining; tuition is rising; and cost per student is increasing faster than inflation or family income. Furthermore, at a time when the United States needs to be increasing the quality of learning outcomes and the economic value of a college education, there are disturbing signs that suggest higher education is moving in the opposite direction. Numerous recent studies suggest that

today's American college students are not really learning what they need to learn. (Bok, 2006)

Paradigm Shifts

Lifelong Learning

Today the shelf life of education provided early in one's life is shrinking rapidly in face of the explosion of knowledge in many fields. Furthermore, longer life expectancy and lengthening working careers create an ongoing need to refresh one's knowledge and skills through both formal and informal learning. Hence, an increasing number of nations are setting the ambitious goal of providing their citizens with ubiquitous, lifelong learning opportunities. Of course, this will require not only a very considerable transformation and expansion of the existing post-secondary education enterprise but also entirely new paradigms for the conduct, organization, financing, leadership, and governance of higher education. Yet, if successful, it could also create true societies of learning, in which the sustained development of knowledge and human capital become the key paths to economic prosperity, national security, and social welfare.

The Global University

The emergence of a global knowledge economy is driven not only by pervasive transportation, information, and communications technologies but also by a radically new system for creating wealth that depends upon the creation and application of new knowledge and hence upon advanced education, research, innovation, and entrepreneurial activities. There is a strong sense that higher education is similarly in the early stages of globalization, through the efforts of an increasing number of established universities to compete in the global marketplace for students, faculty, and resources; through the rapid growth in international partnerships among universities; and through for-profit organizations (e.g., Apollo, Laureate) that seek to expand through acquisition into global enterprises.

While universities must be responsive to the imperatives of a global economy and attendant to their local responsibilities, they must also become responsible members of the global community. In fact, some suggest that we may soon see the emergence of truly global universities that not only compete in the global market place for students,

faculty, and resources, but are increasingly willing to define their public purpose in terms of global needs and priorities such as environmental sustainability, public health, wealth disparities, and poverty. Such “universities in the world and of the world” might form through consortia of existing institutions, new paradigms, or perhaps even existing institutions that evolve beyond the public agenda or influence of their region or nation-state to assume a truly global character. (Glion, 2008)

Cyberinfrastructure

The information and communications technologies enabling the global knowledge economy—so-called cyberinfrastructure, the current term used to describe hardware, software, people, organizations, and policies—evolve exponentially, doubling in power every year or so and amounting to a staggering increase in capacity of 100 to 1,000 fold every decade. It is becoming increasingly clear that we are approaching an inflection point in the potential of these technologies to radically transform knowledge work. To quote Arden Bement, Director of the U.S. National Science Foundation, “We are entering a second revolution in information technology, one that may well usher in a new technological age that will dwarf, in sheer transformational scope and power, anything we have yet experienced in the current information age.” (Bement, 2007) Many leaders, both inside and outside the academy, believe that these forces of change will so transform our educational institutions—schools, colleges, universities, learning networks—over the next generation as to be unrecognizable within our current understandings and perspectives.

The Meta University

Some of the most interesting activities in higher education today involve an extension of the philosophy of open source software development to open up opportunities for learning and scholarship to the world by putting previously restricted knowledge into the public domain and inviting others to join both in its use and development. MIT led the way with its OpenCourseWare (OCW) initiative, placing the digital assets supporting almost 1,800 courses in the public domain on the Internet for the world to use. (Vest, 2006) Today, over 150 universities have adopted the OCW paradigm to distribute their own learning assets to the world. Furthermore, a number of universities and corporations have joined together to develop open-source middleware to support the instructional and scholarly activities of higher education, already used by

several hundred universities around the world. Others have explored new paradigms for open learning and engagement.

One of the most exciting—and controversial—efforts is the Google Book Search project in which a number of leading libraries have joined together with Google to digitize a substantial portion of their holdings, making these available for full-text searches using Google's powerful internet search engines. (Kelly, 2006) For example, over 2 million volumes at the University of Michigan have been digitized, with our complete 8 million volume library now projected to be online by 2010. While there are still many copyright issues that need to be addressed, it is likely that these massive digitization efforts will be able to provide full text search access to a significant fraction of the world's written materials to scholars and students throughout the world within a decade.

Open source, open content, open learning, and other "open" technologies become the scaffolding on which to build truly global universities—what Charles Vest terms the "meta" university. (Vest, 2006) As he observes, "the incredibly large scale of education world wide; the huge diversity of cultural, political, and economic contexts; and the distribution of public and private financial resources to devote to education are too great." Instead, Vest suggests that "through the array of open paradigms, we are seeing the early emergence of a Meta University – a transcendent, accessible, empowering, dynamic, communally-constructed framework of open materials and platforms on which much of higher education world wide can be constructed or enhanced."

Universal Access to Knowledge and Learning

Imagine what might be possible if all of these elements could be pulled together, e.g., internet-based access to all recorded and then digitized human knowledge augmented by powerful search engines, open source software, learning resources (OCW), open learning philosophies (open universities), new collaboratively developed tools (Wikipedia II, Web 2.0); and ubiquitous information and communications technology. In the near future it could be possible that anyone with even a modest internet or cellular phone connection would have access to all the recorded knowledge of our civilization along with ubiquitous learning opportunities.

Within the lifetimes of today's students we are likely to see the linking together of billions of people with limitless access to knowledge and learning tools, all enabled by a rapidly evolving scaffolding of cyberinfrastructure continuing to increase in power one-hundred to one-thousand fold every decade. Perhaps we are on the threshold of the

emergence of a new form of civilization, as billions of world citizens interact together, no longer constrained by today's monopolies on knowledge or learning opportunities. (Duderstadt, 2005)

Governance and Leadership

Governance

Higher education in the United States is clearly going through a period of critical self-evaluation. There is increasing government and stakeholder pressure for demanding better governance and accountability of higher education, particularly in view of the imperatives of the global knowledge economy. Traditionally, the governance of higher education in America has been decentralized to the states at the system level and lay boards at the institution level. The great diversity of university governance—state government, coordinating boards, boards of trustees, faculty senates—suggests that the most appropriate governance structure should involve a unique consideration of history and constraints for each institution. Yet, while a collegial style of governance has a long history both in United States and abroad, the extraordinary expansion of the roles and mission of the university over the past century has resulted in a contemporary institution with only the faintest resemblance to those in which shared governance first evolved. Despite dramatic changes in the nature of scholarship, pedagogy, and service to society, the university today is organized, managed, and governed in a manner little different from the far simpler colleges of the early twentieth century. This is particularly true, and particularly questionable, for the contemporary public university facing an era of significant challenge and change. (Duderstadt, 2000)

In the name of greater accountability, the Bush administration has recently attempted to exert more influence at the federal level. Some of this has been stimulated by the work of the Spellings Commission demanding greater accountability for access, costs, quality, and measuring learning outcomes using the mechanism of accreditation, which in the past has served to qualify American institutions for access to federal student financial aid programs but not to assess quality. Thus far, higher education has effectively lobbied Congress to prevent this from happening. But, of course, the federal government has other tools such as student financial programs, research support, and tax policy!

There are similar calls for greater control of higher education by state governments, driven in part by public concern about the rising costs of public higher

education. Governors and state legislatures are taking a more active role in proposing the agendas for their public colleges and universities through statewide coordinating bodies and appointments to university governing boards. More broadly, there are also calls to consider a major restructuring of governance at the institutional level, recognizing the limited ability of lay boards to understand the growing complexity of the university sufficiently to meet their fiduciary and policy responsibilities. Ironically, this top-down pressure from the federal government, the states, and governing boards on the university is occurring at a time when faculty governance is relatively weak because of high mobility in the faculty marketplace that tends to erode loyalty to, knowledge about, and interest in the affairs of their current university way-station.

From a broader perspective, there is a growing recognition that today's university must be governed, led, and managed with competence and accountability to benefit its diverse stakeholders. These public and private interests can only be served by a governing board that functions with a structure and a process that reflect the best practices of corporate boards, comprised of members with expertise commensurate with their fiduciary obligations, albeit with a deep understanding of the academic culture and values characterizing the university. And, like corporate boards, the quality and performance of university governing boards should be regularly assessed and their members should be held accountable for their decisions and actions through legal and financial liability.

Leadership

For higher education to play the role in enabling prosperity, security, and social well being in the flat world of the global knowledge economy, the university must enjoy a strong sense of trust and confidence on the part of the American public. Key in earning and sustaining this trust and confidence is the university president, working in concert with the governing board of the institution. In the United States, no higher education leader comes to personify an institution in the way a president does. University presidents must not only provide academic leadership but also assimilate and tell the institution's story to build pride internally and support externally. The president has primary responsibility for increasing public understanding and support for the institution as a contributor to society's continued vitality and well-being.

A decade later, a subsequent AGB Task Force on the State of the University Presidency found that the presidents of American colleges and universities continue today to face impediments in their efforts to provide capable leadership, particularly on

important national issues. (Association of Governing Boards, 2006) The AGB study found that the university presidency is all too frequently caught between these opposing forces, between external pressures and internal campus politics, between governing boards and faculty governance. There is an increasing sense that neither the lay governing board nor elected faculty governance has either the expertise nor the discipline—not to mention the accountability—necessary to cope with the powerful social, economic, and technology forces driving change in our society and its institutions. The glacial pace of university decision-making and academic change simply may not be sufficiently responsive or strategic enough to allow the university to control its own destiny. To strengthen the voice of the presidency and secure the ability to provide the necessary leadership during a period of considerable change, challenge, and opportunity, the task force set out three imperatives:

1. To reconnect the president with the core academic mission of the university, i.e., learning and scholarship. The tendency to view the presidency as just another CEO role, dominated by begging for dollars or building winning athletic programs, must be resisted and instead re-establishing academic leadership should be seen as a president's highest priority.
2. To urge boards and presidents to view the university presidency not as a career or a profession, in and of itself, but rather as a calling of immense importance, similar to those of other forms of public service.
3. Integral leadership: A new style of collaborative but decisive leadership. A president must exert a presence that is purposeful and consultative, deliberative yet decisive, and capable of course corrections as new challenges emerge. Integral leadership succeeds in fulfilling the multiple, disparate strands of presidential responsibility and conceives of these responsibilities as parts of a coherent whole. Leadership of this sort links the president, the faculty, and the board together in a well-functioning partnership purposefully devoted to a well-defined, broadly affirmed institutional vision.

To this should be added one more theme drawn from a recent memoir by a has-been university president: "Whether independently governed or state created, all of our institutions are in reality public institutions with obligations to addressing the needs of today's society. Yet, they are also enduring social institutions with a duty of stewardship

to generations past and a compelling obligation to take whatever actions are necessary to build and protect their capacity to serve future generations." (Duderstadt, 2007)

To be sure, it is sometimes difficult to act for the future when the demands of the present can be so powerful and the traditions of the past so difficult to change. Yet, perhaps this is the greatest challenge for our universities and the most important role of academic leadership in the years ahead as university presidents navigate their institutions through the stormy seas of a changing world.

Thank you for this opportunity to join the EUA presidents for your conference on leadership and governance in higher education.

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