

A 21st Century Learn-Grant Act for a Society of Learning

We have entered an era in which educated people and the knowledge they produce and utilize have become the keys to the economic prosperity and well-being of our society. Education, knowledge, and skills have become primary determinants of one's personal standard of living and quality of life. Just as our society has historically accepted the responsibility for providing needed services such as military security, health care, and transportation infrastructure in the past, education today has become a driving social need and societal responsibility. It has become the responsibility of democratic societies to provide their citizens with the education and training they need, throughout their lives, whenever, wherever, and however they desire it, at high quality and at an affordable cost.

Of course, this also has been one of the great themes of higher education in America. Each evolutionary wave of higher education has aimed at educating a broader segment of society, at creating new educational forms to do that—the public universities, the land-grant universities, the normal and technical colleges, the community colleges. But today we must do even more as a nation to enable our citizens to participate fully in an age of knowledge. It is clear that the access to advanced learning opportunities is not only becoming a more pervasive need, but it could well become the defining domestic policy issue for a knowledge-driven society. To this end, one might consider as a national objective the creation of a *society of learning*,¹ in which opportunities for learning become ubiquitous and universal, permeating all aspects of our society and empowering, through knowledge and education, all of our citizens.

The great and ever-increasing diversity characterizing higher education in America makes it clear that there are many paths to such a future. But there are a number of themes that would almost certainly characterize higher education in a society of learning:

- *Learner-centered*: Just as other social institutions, our colleges and universities must become more focused on those we serve. We must transform ourselves from faculty-centered to learner-centered institutions, becoming more responsive to what our students need to learn rather than simply what our faculties wish to teach.
- *Affordable*: Society will demand that we become far more affordable, providing educational opportunities within the resources of all citizens. Whether this occurs through greater public subsidy or dramatic restructuring of the costs of higher education, it seems increasingly clear that our society—not to mention the world—will no longer tolerate the high-cost, low-productivity paradigm that characterizes much of higher education in America today.
- *Lifelong Learning*: In an age of knowledge, the need for advanced education and skills will require both a personal willingness to continue to learn throughout life

and a commitment on the part of our institutions to provide opportunities for lifelong learning. The concept of student and alumnus will merge. Our highly partitioned system of education will blend increasingly into a seamless web, in which primary and secondary education; undergraduate, graduate, and professional education; on-the-job training and continuing education; and lifelong enrichment become a continuum.

- *Interactive and Collaborative:* Already we see new forms of pedagogy: asynchronous (anytime, anyplace) learning that utilizes emerging information technology to break the constraints of time and space, making learning opportunities more compatible with lifestyles and career needs; and interactive and collaborative learning appropriate for the digital age, the plug-and-play generation.
- *Diverse:* The great diversity characterizing higher education in America will continue, as it must to serve an increasingly diverse population with diverse needs and goals. Market forces will drive institutions to stress their unique competence rather than attempt to emulate one another.
- *Intelligent and adaptive:* Knowledge and distributed intelligence technology will increasingly allow us to build learning environments that are not only highly customized but adapt to the needs of the learner.

Higher education must define its relationship with these emerging possibilities in order to create a compelling vision for its future as it enters the next millennium. Furthermore, there is an increasing sense that the social contract between the university and American society also may need to be reconsidered and perhaps even renegotiated.² But rather than create an entirely new model, perhaps it is more appropriate to consider the relationship established over a century and a half ago: *the land-grant university model*.

Recall that at that time America was facing a period of similar change, evolving from an agrarian, frontier society into an industrial nation. A social contract was developed between the federal government, the states, and public colleges and universities designed to assist our young nation in making this transition. The land-grant acts were based upon several commitments: First, the federal government provided federal lands for the support of higher education. Next, the states agreed to create public universities designed to serve both regional and national interests. As the final element, these public or land-grant universities accepted new responsibilities to broaden educational opportunities for the working class while launching new programs in applied areas such as agriculture, engineering, and medicine aimed at serving an industrial society, while committing themselves to public service, engagement, and extension.

Today our society is undergoing a similarly profound transition, this time from an industrial to a knowledge-based society. Hence it may be time for a new social contract aimed at providing the knowledge and the educated citizens necessary for

prosperity, security, and social well-being in this new age. Perhaps it is time for a new federal act, similar to the land grant acts of the nineteenth century, that will help the higher education enterprise address the needs of the 21st Century. Of course, a 21st Century land-grant act is not a new concept.³ Some have recommended an industrial analog to the agricultural experiment stations of the land-grant universities. Others have suggested that in our information-driven economy, perhaps telecommunications bandwidth is the asset that could be assigned to universities much as federal lands were a century ago. Unfortunately, an industrial extension service may be of marginal utility in a knowledge-driven society. Furthermore, Congress has already given away most of the available bandwidth to traditional broadcasting and telecommunications companies.

But there is a more important difference. The land-grant paradigm of the 19th and 20th Century was focused on developing the vast natural resources of our nation.⁴ Today, however, we have come to realize that our most important national resource for the future will be our people. At the dawn of the age of knowledge, one could well make the argument that education itself will replace natural resources or national defense as the priority for the twenty-first century. We might even conjecture that a social contract based on developing and maintaining the abilities and talents of our people to their fullest extent could well transform our schools, colleges, and universities into new forms that would rival the research university in importance. In a sense, the 21st Century analog to the land-grant university might be termed a *learn-grant university*.

A learn-grant university for the 21st Century might be designed to develop our most important asset, our human resources, as its top priority, along with the infrastructure necessary to sustain a knowledge-driven society. The field stations and cooperative extension programs—perhaps now as much in cyberspace as in a physical location—could be directed to the needs and the development of the people in the region. While traditional academic disciplines and professional fields would continue to have major educational and service roles and responsibilities, new interdisciplinary fields such as knowledge management or global systems engineering might be developed to provide the necessary knowledge and associated problem-solving services in the land-grant tradition.

In an era of relative prosperity in which education plays such a pivotal role, it may be possible to build the case for new federal commitments based on just such a vision of a society of learning. But certain features seem increasingly apparent. New investments are unlikely to be made within the old paradigms. For example, while the federal government-research university partnership based on merit-based, peer-reviewed grants has been remarkably successful, this remains a system in which only a small number of elite institutions participate and benefit. The theme of a 21st Century *learn-grant act* would be to broaden the base, to build and distribute widely the capacity to contribute both new knowledge and educated knowledge workers to our society, not simply to channel more resources into established institutions. Furthermore, while both Congress and the White House seem increasingly confident in the strength of our economy, they are unlikely to abandon entirely the budget balancing constraints that many believe contributed to today's prosperity. However, there are other models as

illustrated by the 1997 Budget Balancing Agreement in which tax policy was used as an alternative mechanism to invest in education.

An example illustrates one possible approach: Suppose the federal government were to provide a permanent tax credit to industry for those research and educational activities undertaken jointly with public universities. The states would commit to matching the federal contributions, perhaps by providing their colleges and universities with the infrastructure necessary to participate in the digital age, developing the research parks and educational networks to enable higher education to partner more effectively with industry, or stripping away the regulations and bureaucracy preventing educational institutions from adapting more rapidly to a knowledge-driven economy. The participating universities would not only agree to work with business and industry on projects of interest, but would restructure their intellectual property policies to facilitate such partnerships. Participating universities would go beyond this to build the capacity to provide more universal educational opportunities, perhaps through network-based learning or virtual universities. Universities would also agree to form alliances, both with other universities as well as with other parts of the education enterprise such as K-12 education and workplace training programs.

Other national priorities such as health care, the environment, global change, and economic competitiveness might be part of an expanded national service mission for universities. Institutions and academic researchers would then commit to research and professional service associated with such national priorities. To attract the leadership and the long-term public support needed for a valid national public service mission, faculties would be called upon to set new priorities, collaborate across campus boundaries, and build upon their diverse capabilities.

Whatever the mechanism, the point seems clear. It may be time to consider a new social contract, linking together federal and state investment with higher education and business to serve national and regional needs, much in the spirit of the land-grant acts of the 19th Century. Key in this effort is our ability as a society to view higher education as, in part, a public good that merits support through the investment of public tax dollars. In this way, our nation could best protect the public purpose of the higher education enterprise and sustain its quality, important traditions, and essential values while better enabling it to respond to the needs of a 21st Century society.

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¹ *Renewing the Covenant: Learning, Discovery and Engagement in a New Age and Different World*, Kellogg Commission on the Future of the State and Land-Grant Universities (2000)

² Vernon Ehlers, "Unlocking Our Future: Toward a New National Science Policy," a report to Congress by the House Committee on Science (September 24, 1998).

³ Walter E. Massey, "The Public University for the Twenty-First Century: Beyond the Land Grant," 16th David Dodds Henry Lecture, University of Illinois at Chicago, (1994); J. W. Peltason,

“Reactionary Thoughts of a Revolutionary,” 17th David Dodds Henry lecture, University of Illinois at Urbana-Champaign (October 18, 1995).

⁴ Frank Rhodes, “The New American University,” *Looking to the Twenty-First Century: Higher Education in Transition* (Champaign-Urbana: University of Illinois Press, 1995).