



The Land-Grant Mission and International Outreach

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Land-grant universities were the first higher-education institutions to reach out to the people they serve. Since they were established in 1862, they have strived to increase their reach. The concept of outreach as we know it today can be traced to this statement by Justin Morrill, author of the historic Morrill Act that created the national system of land-grant universities, made when he first introduced the legislation in 1857:

Let us have such colleges as may rightfully claim the authority of teachers to announce facts, fix laws, and *scatter broadcast* that knowledge which will prove useful in building up a great nation (Schaub 1953).

The reach of these land-grant universities has always been limited — limited by geographical barriers (distance, oceans, and mountains); limited by political barriers (boundaries and ideologies); and limited by social barriers (language and customs).

In the early years, the limits of outreach were not far beyond the campuses themselves. A day's ride on horseback was about the extent of an outreach effort, which made truly statewide outreach, especially in large states, an unrealistic goal.

Technological advancements have gradually expanded the land-grant university's reach. Advancements in transportation — railroad, automobile, and air — made truly statewide outreach possible. However, this kind of outreach was — and is — very time-consuming and costly, so the land-grant university's reach was still limited by the availability of resources, both human and financial.

Advancements in communication technology provided the next major boost to the land-grant university's reach. First radio, followed by television, satellite communication, and today's fiber optics, Internet, and World Wide Web, eliminated resource and distance barriers — first, throughout the United States, and now throughout much of the world.

These technological advancements brought land-grant universities to the threshold of a truly global outreach capability. The only major barriers that remain are political and social in nature. Anyone who has paid attention to developments in the world during the past decade, from the tearing down of the Berlin Wall to the peaceful transfer of Hong Kong from Great Britain to China, knows these barriers are also crumbling.

New forces are sweeping the world. These catalysts include the desire to control one's destiny, which is being played out through the rapid spread of democracy; and the desire to improve one's quality of life, which is being played out through demise of controlled economies in favor of free-market economies. Many countries are

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eliminating trade barriers, easing travel restrictions, and launching major new international initiatives that focus on the application of science and technology for the economic development of entire nations and regions. For the first time in the history of the human race, we have the opportunity to begin bringing the world together in a meaningful way — to begin creating a truly global community. I believe the land-grant concept and practice of outreach — of extending the knowledge resources of our universities

to all who are within our reach — will be our most effective and most important tool in creating this truly global community.

Fundamentally, we're moving from internationalization to globalization. Susan Berresford, president of the Ford Foundation, explained that "globalization describes the rapid and accelerating worldwide movement of technology, goods, capital, people, and ideas. The term reflects a more comprehensive level of interaction than has occurred in the past, and suggests something different from the word 'international.' It implies a diminishing importance of national borders and the strengthening of identities that stretch beyond those rooted in a particular region or country" (Ford Foundation Annual Report 1997).

The higher-education community must take the lead in this movement toward globalization because the most important resource we have in building a truly global community is knowledge. I also believe it is most appropriate for those institutions that were created, in part, to "*scatter broadcast* knowledge that will prove useful in building up a great nation" (Schaub 1953) to extend their reach once again and apply that concept to building up a great world.

The response of the higher-education community has been encouraging. During the past fifteen months, I have had the opportunity to participate in four international conferences on global issues affecting higher education. Two focused on broad issues, and two focused on very specific but strategically important issues — agriculture and science and technology. At these conferences, it was clear that the academy's emphasis is no longer on national or even regional perspectives, but on developing a global perspective.

Clearly, we will need a global perspective because the challenges we face are global in scale. Our population is growing at an alarming rate — one that threatens the planet's ability to sustain itself. It took until 1850 for the world's population to reach one billion. It took just eighty more years for it to double to two billion, and just forty-five years to double again to four billion, a milestone that was reached in 1975. Today — in less than twenty-five years — the population is approaching six billion, and estimates are that it will reach eight billion by the year 2020.

These are staggering numbers. We're adding population at the rate of a city the size of New York every month, and an entire nation almost the size of Mexico every year. Not only is the population growing, but advances in technology and the emergence of global economic markets are providing an increasing number of the world's people with the financial resources to aspire to a higher standard of living.

We face yet another challenge in that the population growth is not uniformly distributed about the world, and therefore, our resource-distribution systems — such as those for food — while adequate for some parts of the world, are woefully inadequate for others.

This combination of a constantly escalating population and the desire for better quality of life is putting a tremendous strain on our environment to produce food to sustain this growing population and to provide resources needed to attain a higher standard of living, such as better building materials, clothing, and energy to make our living environments more comfortable.

These are challenges of global perspective and global scale, and I can't think of a better or more appropriate time for the people of the world to begin coming together, and to begin acting globally.

As leaders of the education and scientific community — a community that has long recognized the need to think and work globally — we need to take the lead in developing agendas that, first, bring our institutions together in cooperative and collaborative initiatives, and, second, to use these initiatives to bring all of our nations and peoples together in actions that begin to address these challenges. There are quite a number of items that should be on such an agenda. Let me offer a few.

1. We must learn to share — share resources, share ideas, and, most importantly, share knowledge.

Scientist Robert Oppenheimer wrote "...the unrestricted access to knowledge, the unplanned and uninhibited association of (people)

for its furtherance — these are what may make a vast, complex, ever-growing, ever-changing, even more specialized and expert technological world, nonetheless a world of human community” (Oppenheimer 1953).

Iowa State University is working aggressively to increase its involvement in world development, and the focus of that effort is sharing knowledge. We have increased the number and scope of exchange agreements with educational institutions and government agencies throughout the world. We now have nearly seventy-five active agreements with institutions and government agencies in fifty-eight nations, including recently launched agricultural initiatives with Fudan University and the Chinese Agricultural Ministry, and the newly established World Federation of Nondestructive Evaluation Centers.

2. We must increase our efforts to work through partnerships — strengthening existing partnerships, and seeking out new partnerships.

One of Iowa State's newest partners in its globalization efforts is the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Out of this partnership has developed the International Institute for Theoretical and Applied Physics at Iowa State, which uses the sharing of science and technology to generate economic opportunity in developing nations of the world.

Each year, hundreds of scientists from developing nations come to Iowa State to share in its knowledge base in physics — knowledge scientists then take home to help spur their own nation's economic development. We have ambitious plans for this institute — plans to expand it to thousands of scientists and to many other scientific disciplines. We're very pleased that Director General Federico Mayor and the staff of UNESCO share this dream with us.

We also need partners in the private sector. Private sector partners bring resources — both financial and human — to the table that will be essential in meeting the agricultural challenges of the next century. We have several private sector partners in our international efforts, including United Technologies, Pioneer Hi-Bred International Inc., John Deere, and others.

3. We must identify areas of common ground and common understanding, and from these, begin to develop programs that we can all support.

This is the primary focus of a USIA-funded Linkage Project involving Iowa State and the National Agricultural University of Ukraine. This project, launched in 1992 and recently extended through 2002, focuses on developing common ground and common understanding in our curricula so that we can move toward mutual recognitions. It is only after we identify these areas of commonality that we can effectively work to change our curricula and curriculum structures to make it easier for students and faculty to exchange between and among them, to enhance fluidity of education and globalize our educational processes.

These differences can be as basic as semesters versus nine-week terms, addressing comparability of different course materials and curricula, and relations with existing accrediting bodies. Regardless, increasing our own flexibility in academic structures and requirements will be essential in overcoming differences and establishing areas of common ground.

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Identifying areas of common ground and common understanding is also of primary importance as we develop our research agendas for the future, both to identify broader, overarching issues that have global impact, and areas within these issues where each of our institutions brings special expertise. After doing this, we must look for new opportunities to work cooperatively on these issues, and to put our

scientific and technological resources to use to meet the needs of the world's people.

Our Linkage Project experience with the National Agricultural University of Ukraine has been highly successful in developing common-ground issues in the area of agricultural education. It has also given us a taste for the magnitude of the task ahead of us, for this six-year effort, now approved for another six years, deals with just one academic area, and commonalities between two nations.

4. We must work to increase understanding between the people of our nations.

The most effective way to accomplish this is individually — one student at a time and one faculty member at a time. At Iowa State, we are working toward this goal in several ways.

First, we continue to actively recruit students from all nations. Currently, more than 2,500 of our students — ten percent of our enrollment — come from more than 120 other nations. In addition to learning about our nation, people, and culture, these students are also our teachers — teaching us about their nations, peoples, and cultures. Second, we require that all of our students take at least one course with a primary focus on international relations. Third, we are increasing the number of opportunities for students and faculty to live, work, and study in other nations as part of their educational programs. We are increasing the number and scope of our exchange agreements with other nations, and we are expanding the number of study-abroad opportunities for our students, more than doubling that number during the past two years. Our goal is to provide all students with the opportunity for international experience as part of their education.

5. *We must build our own infrastructure for cooperation and collaboration.*

Creating an infrastructure includes some very basic activities, such as making sure sufficient resources are allocated to properly support exchange programs and projects, including funds for transportation and communication needs and staffing for personal assistance and academic advising.

This infrastructure also provides other proper training and useful materials for faculty and students who want to take part in these activities. Last year at Iowa State, we held a series of workshops to encourage and assist faculty in developing international-exchange programs in China and the Newly Independent States; we were pleased to have the assistance of high-level consulate staff from both Chinese and Ukrainian embassies. In addition, our Office of International Students and Scholars provides a handbook for faculty interested in developing study-abroad programs, including some very basic "how-to" information provided by faculty with extensive international experience.

Another practical but exceedingly important infrastructure activity is doing all we can to guarantee the safety of our students and faculty who visit other nations, and to protect those who come to our campuses as our guests. This is something we cannot do alone. It will require the full cooperation of governments at all levels.

In addition, there must be consistency of support so there can be stability in our efforts. International programs must become a part of the fabric of our institutions, interwoven in the teaching, research, and outreach missions.

There are many other items that should be included in this globalization agenda, and our immediate goal should be to identify them, set goals, and develop plans to achieve these goals. The recent world higher-education conferences have been helpful to me in this process, and I look forward to continuing this kind of dialogue on an even more aggressive pace.

The challenges that face us require a coming together of the world higher-education community in ways that extend beyond regions, continents, and even academic disciplines. We could well look to the Kellogg Commission on the Future of State and Land-Grant Universities undertaken by the National Association of State Universities and Land-Grant Colleges (1996), which brought together leaders of the nation's public universities to address issues affecting higher education on a national scale, as a possible model with which we might begin to address issues affecting higher education, and the world, on an international scale.

The barriers we face are still formidable. They are the same barriers people have always faced, including language, cultural, religious, and political differences, and differences resulting from the unequal distribution of resources. But now we have the advantage of being able to reach out more broadly and more effectively, to bring people together in productive discourse — a discourse focusing on global commonalities rather than national and cultural differences.

International activities are going to grow and expand, driven by economic opportunity and by the stresses we are placing on an environment unrestricted by national boundaries. A new global community is developing.

The higher-education community can choose the role it wishes to play in developing this new global community because we are already part of a global community of scholars. Our science and technology have enabled us to overcome virtually all of the physical barriers of the globe so that our reach can extend to all corners of the world. Do we stop there? Or do we work with the same aggressiveness, applying our knowledge in the social sciences, to overcome our social differences — the only remaining barriers to a global community that is based on a foundation of understanding and peace? Of course, I choose the latter, for the farther we can reach, the farther we should reach. ■

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