

links with local industry, and so on. As is the case with most Latin American institutions of higher education, UBA and UNAM share a strong professional orientation that can be observed in their schools of engineering, medicine, law, accounting, and philosophy and letters. In most of these schools R&D constitutes only a marginal activity.

With all the enormous problems exemplified by these universities and the marginal role that local R&D plays in addressing societal needs, the question arises over whether universities in developing countries should stop doing R&D. There is, of course, no easy answer to this dilemma, since the creation and diffusion of knowledge remain among the principal missions of the modern university. Likewise, some of the large, public institutions possess important research facilities and equipment that have been accumulated over decades. Several universities also employ significant numbers of scientists and technicians whose training (frequently obtained at prestigious universities in industrialized nations) represent a significant investment in money and time. All these resources must not be wasted. Two approaches exist to make local R&D more relevant. First, local R&D should be

focused on the creation and consolidation of “niches,” in which a number of scientists and technologists concentrate on specific areas and become highly competitive in those fields. Second, R&D efforts should also be directed to the solution of the most urgent needs of the local society—such as health, energy, food, education and pollution.

It remains to be seen whether the current globalization process and the growing availability of technology communication and information constitute a real chance to overcome the lack of relevance that local R&D has had so far in the developing world. It is possible that the existing gap between the industrialized and the developing nations will widen as a result of technology. The risks of losing track in the present vertiginous knowledge race is more real than ever, as information goes back and forth from one point to the other in the world at unprecedented speed. Thus researchers and technologists in developing countries must take advantage of communications networks to maintain and improve the exchanges with the world's prime places of R&D, thus avoiding the perils of moving from marginalization to exclusion. ■

Attitudes About International Education in the United States

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Dramatic geopolitical shifts and technological expansion during the last century have prompted much discussion about the role of higher education in preparing a more globally literate national citizenry. But to what end? Today, evidence suggests that few postsecondary graduates have adequate understanding of the world beyond U.S. borders, speak another language with any degree of fluency, or can function competently in different cultures.

To better understand and promote international education in the United States, the American Council on Education (ACE), the umbrella organization for over 1,800 colleges and universities and nearly 200 national and regional higher education associations and organizations, has launched a multiyear initiative aimed at mapping current international activity and stimulating campus dialogue about what constitutes effective international education. Documents recently published by the ACE provide some introductory insights into international activity nationwide as well as public perception of its importance.

Public Opinion on International Education

Despite at times conflicting accounts from the media and various political authorities, a popular consensus seems to exist

that international education at the postsecondary level is important. In a random telephone survey of 1,000 Americans over the age of 18 conducted for the ACE in September 2000, respondents indicated that international education was an important personal and national concern.

- Knowledge about international issues is important, especially for future generations. Over 50 percent of respondents believed it was important personally; almost 90 percent considered it important for their children or young people today.
- Colleges and universities should require international training for students and provide them with international skills and knowledge. Over 70 percent of the sample said students should be required to study a foreign language in college if they did not already know one. More than three out of four supported requiring students to take international courses.
- College and university students should have an international experience as part of their overall education. Over 70 percent of the respondents agreed that students should have a study, work, or internship experience abroad sometime during their postsecondary studies.
- More than 75 percent of those asked specified that international education opportunities would be an important consideration in selecting a college or university.

A companion survey of 500 high school seniors intending to enroll at a four-year college or university produced similar findings, confirming a broad national base of support for international education. Conducted by the ACE and the Arts & Science Group, Inc./*studentPOLL*, the random national poll found that:

- Incoming freshmen believe it is important that colleges and universities offer international experiences and opportu-

nities. Over 80 percent of those responding believed it important that colleges and universities offer opportunities to interact with students from other countries. Nearly 75 percent felt it important that their college offer courses on international topics. Over 70 percent said it was important that their institution offer study abroad programs.

- The majority of freshmen plan on studying international topics and having international experiences during their programs of study. Nearly 60 percent said they plan to study a foreign language. Half of the respondents indicated that they intend to take courses that focus on the history or culture of another country, and almost half (48 percent) noted that they hoped to study abroad.

- International experiences are not uncommon among incoming freshman. Of the students surveyed, 98 percent had studied a foreign language in high school, over half had traveled outside the United States, and more than three out of four had had some sort of international experience.

International Education in Overview

How do these findings correspond with current practice? Despite current rhetoric, a recently completed ACE report, *Internationalization of U.S. Higher Education: Preliminary Status Report 2000*, on the status of international education at U.S. colleges and universities shows that the state of internationalization nationally remains low and that little improvement has been made over the past decade. Major findings of the report include:

- Foreign-language study and competency has decreased dramatically, with requirements in 4-year institutions dropping from 34 percent in 1965 to just over 22 percent in 1995. Total enrollments in foreign-language study have declined from a high of 16 percent of total enrollments in the 1960s to a current average of less than 8 percent. Of those students studying a foreign language, less than 40 percent continue past the introductory level.

- Very few students study abroad. Despite recent optimism about participation levels, less than 114,000 of the country's 14 million plus postsecondary student population studied abroad in 1999—or less than 1 percent. Less than 3 percent of American students study abroad over the course of their higher education programs. Also, there is a trend toward shorter study abroad experiences.

- Current classroom and other activities provide students with only rudimentary international skills and competencies. Less than 7 percent of all higher education students were able to meet even the basic standards of “global preparedness,” according to a scale that defined preparedness as four or more credits of international studies and a certain number of years of foreign-language study.

- Federal funding for international education has declined over the past decade. The Department of State's Fulbright program has borne a 43 percent reduction in constant dollar funding since 1994. State-level funding has similarly declined.

Making the Rhetoric a Reality

These findings and others suggest an unfortunate dichotomy in current higher education practice: while there is significant public support for international education opportunities, little of substance is actually being done and postsecondary graduates remain at best poorly prepared for work requiring some international perspective.

To be sure, higher education has a complicated set of competing values and interests, disciplinary and institutional traditions, and funding. Forcing a new set of educational expectations, like internationalization, into this mix is thus no mean task. Still, as the cultures and peoples of the world continue to intermingle with increasing frequency, pressures will intensify to promote international understanding.

In this changed environment, colleges and universities, as keepers and transmitters of knowledge, must find ways to modify their educational offerings. Those that do not run the risk of obsolescence in an educational marketplace that increasingly values graduates who can speak multiple languages and are cross-culturally competent. ■

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