particularly in engineering and computer science.

Expanding Options for Mobility

An increasing trend is reverse flow of scientists and engineers back home, as countries are increasing science and engineering employment opportunities—expanding their institutions of higher education and research capacity. In 1998, the majority of foreign doctoral recipients in science and engineering fields from universities in the United Kingdom.

The return flow of science and engineering doctoral recipients from U.S. universities differs by country of origin. returned home after earning degrees. In fact, 2 among the 10 top countries of origin, Malaysia and Turkey, had all doctoral recipients return home. Ireland is the only exception, with less than half (45 percent) returning to Ireland as their first destination after receiving a doctoral science and engineering degree. The return flow of science and engineering doctoral recipients from U.S. universities differs by country of origin. Mexico and Brazil have the highest return flow, India and China the lowest.

Besides returning home for employment, there are many other options for contributing to the home-country’s science infrastructure. Foreign doctoral recipients who remain abroad are contributing to the diffusion of science and engineering knowledge from cooperative research, short-term visits, and networking of scientists.

Conclusion

The demographic downturn in industrial countries provides an opportunity for more foreign students to enter graduate science and engineering programs for cutting edge knowledge and research in advanced nations. Subsequently, this provides greater circulation and diffusion of S&E knowledge as foreign students return home or maintain contact with the science and engineering community in their home country. Global diffusion of science and engineering knowledge and expansion of doctoral education abroad imply that a larger share of academic research and development and scientific knowledge will be generated outside the United States. This challenges the United States to devise effective forms of collaboration and information exchange to benefit from, and link with, the other countries’ and regions’ expanding scientific capabilities.

Author’s Note: Data and analyses of these trends will be published in the National Science Board report: Science & Engineering Indicators—2002 (forthcoming).

International Diploma Mills Grow with the Internet

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International education in its positive sense is one of the best parts of modern higher education. The kind of cross-pollination available through transnational utility of degrees and academic experiences is good for all parties. However, there are weevils lurking in the mix of international degrees.

International quality control of degrees is becoming a major issue as more diploma mills are flushed out of the United States or appear spontaneously in countries with little oversight of private colleges. Some of these entities send out bulk e-mails offering “prestigious unaccredited degrees” for a fee, no questions asked, no work required. Others require nominal work or a one-month residency on some tropical isle in order for the degree to be awarded. A recent trend among unaccredited U.S. institutions is to go to foreign countries—almost always small ones—for “accreditation.” Some startups intentionally seek out weak points in the international higher education oversight framework.

International Mystery Colleges

Columbia Pacific University was closed by the California courts at the request of the state attorney general. It has reappeared in Montana, which has no laws governing private college operations, as Columbia Commonwealth University and has been “accredited” by the government of Malawi. It now claims that its Malawi-approved degrees are good throughout the Commonwealth. If Malawi lists it with UNESCO, how should its degrees be treated?

Berne University has offices in New Hampshire but is “accredited” by St. Kitts, notorious for its willingness to accredit anything with a pulse. This is the country
that “accredited” a Texas man as Eastern Caribbean University, offering degrees based on commercial TV shows. St. Kitts has sent Berne’s name to UNESCO for listing. UNESCO does little screening of “colleges” submitted for its list, which is used by the American Association of Collegiate Registrars and Admissions Officers and other organizations. Oregon has received no response to its repeated requests for a copy of Berne’s application materials for accreditation and the St. Kitts review of these materials.

Vancouver University in British Columbia has some kind of provincial charter to operate, but the provincial private education authority is suing to close it. Canada does not list it with UNESCO. However, Canada has no real accreditation function at the national level. Vancouver University has been gliding along for many years, issuing degrees. Are its degrees legitimate?

Greenwich University on Norfolk Island has a parliamentary charter of some kind from Australia, but Australia’s own higher education quality-control authority says that it does not meet Australian standards. Nonetheless, it provides all comers with its charter and issues degrees all over the world. It asserts that its charter makes it a legitimate institution. Is it a legitimate Australian institution or a shameless diploma mill?

The Monterrey Institute for Graduate Studies (MIGS) appears at first glance to be a branch of a legitimate Mexican institution, but it grants doctorates, which the Mexican institution does not have authority to do. MIGS has offices in Texas and Florida and is a Nevada corporation, yet it has not been approved to operate as a college by any of these states. It appears to be owned by a Florida family known for its Internet-based “college” activities. Oregon’s inquiries to the Mexican government, presented in English and Spanish, have received no response in two months. It is unclear what government has jurisdiction over its offerings.

FFELP Approval

The U.S. government does not independently evaluate the academic quality of a foreign institution when making decisions about FFELP eligibility (i.e., whether its U.S. students are eligible for certain guaranteed loans). The U.S. Department of Education simply determines whether the institution is recognized by its national government (no matter how that recognition was acquired) and whether it has adequate financial management practices. As we have seen, recognition by a national government can mean a lot or it can mean nothing.

What is the best way to determine whether a degree issued in another country should be valid in the United States?

Regulation of International Degrees

Many states have no protective laws such as Oregon’s. People can present any piece of offshore paper as a college degree and get away with it. Our state law exists in part because there is no effective national law in the United States that governs the usability of degrees issued in other countries. Indeed, the U.S. government does very little oversight even for U.S.-based degrees. The states are on their own.

What is the best way to determine whether a degree issued in another country should be valid in the United States? There is no easy answer. Right now, each state may act independently to decide what degrees are valid for use within their jurisdiction. Oregon generally uses the AACRAO list of foreign institutions as a baseline. However, ACCRAO relies on the UNESCO list, which has very limited screening for acceptance.

Some have suggested that a WTO-like set of market guidelines and policies is a good way to make degrees more easily usable across national borders. I doubt that this approach can be made workable outside countries that use some variant on the German or U.S. educational models—there are too many differences and too few cognate expectations from one country to another.

College degrees are not a commodity like wheat or coal. There are no agreed-upon international standards that make degrees uniformly identifiable and usable from country to country. Absent such standards, each jurisdiction must be prepared to set and defend its own expectations of content and quality. Oregon has done so.