

The American university system produces many Nobel Prize winners. Craig Mello, at right, and colleague Andrew Fire won the 2006 Nobel Prize in Medicine for their genetic research and its possible application to the treatment of AIDS and cancer.



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Thirty Per Cent Hold Bachelor's Degrees

Highest success rates in the world hide large number of drop-outs

BY ARTHUR M. HAUPTMAN

BEGINNING WITH THE ESTABLISHMENT OF HARVARD University in 1636, most early universities in the United States were private institutions. Over the course of the nation's history, the number and scope of public institutions has greatly expanded. In 1787, the new U.S. Constitution gave responsibility to the states for most important domestic functions, including education. This has meant that almost all of these public institutions of higher education – defined as those in which taxpayer dollars are a primary source of funding and public authorities are primarily responsible for their governance – are either state- or locally-governed.

System Grew in Surges

Federal legislation enacted in 1862 encouraged the creation of land-grant universities in virtually every state. After the Second World War, many public four-year-degree institutions were created or expanded to accommodate rapid population growth. In addition, in 1947, the report of a federally-sponsored commission spurred the creation of community colleges. These institutions now account for more than one-third of all enrolments. Three-quarters of all college students now enrol in public institutions.

To finance these public institutions, governments stepped in by funding the basic operations including instruction and support for research conducted on campus or in institution-sponsored facilities, and by providing student financial aid such as grants,

scholarships, loans and work-study opportunities. The states had the primary responsibility for funding instruction and basic operations of public institutions, while the federal government provided most of the funds for academic research and student financial aid.

In the U.S., state income taxes, sales taxes and other state tax-based revenues (such as lottery funds) are the primary form of taxpayer support for public institutions. In 2006-07, state funds for post-secondary education exceeded \$70 billion, more than one-half of a per cent of Gross Domestic Product (GDP). Most of these funds come from the individual states. Total spending for post-secondary education in the U.S. from all sources accounts for nearly 3 per cent of GDP, which is the highest level of post-secondary investment in the world. On a per student basis, state funding now amounts to almost \$10,000 per full-time equivalent student.

SPECIAL SECTION

Post-Secondary Education



Tuition Fees Boosted Revenues

The growth in tuition and fees as a proportion of total revenues of public institutions is one of the most marked trends in post-secondary education

finance in recent decades in the U.S. as well as in many other countries around the world. Tuition fees now pay for more than one-third of the educational activities of public institutions in the U.S., as opposed to 10 per cent three decades ago. There is quite a large variability among states in the reliance on fees, from 13 per cent in New Mexico to 77 per cent in Vermont.

To pay for their tuition fees, many students take out loans. The 1965 Higher Education Act established a number of student financial-aid programs that form the basis for student financial support in the U.S. today. Guaranteed Student Loans, one of those programs, represented an interesting approach with

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respect to federalism. At the time, a dozen state agencies guaranteed private lenders against the risk of default for loans made to student borrowers who had little or no collateral to secure their loans. The federally-guaranteed loan program worked with existing state agencies to ensure that students in states without guarantee agencies would be able to borrow. Today, the student loan industry in the U.S. makes more than US\$100 billion annually in loans. The average amount borrowed by an undergraduate student is about US\$20,000 and graduate student borrowing is much higher.

Research has been another major source of revenue for universities. The federal government traditionally has been the primary source of financial support for research conducted on campus, including at federal laboratories. Total annual federal spending in support of campus-based research is now about \$30 billion. The bulk of this federal funding of academic research is based on peer review of proposals.

Rather than ensuring the overall quality of education, the federal government's primary responsibility has been to ensure that the thousands of institutions attended by millions of federal student aid recipients meet minimal standards and to confirm that federal taxpayer dollars are appropriately spent.

Not Helping Low-Income Students

To improve the efficiency of higher-education systems, the U.S. Secretary of Education's Commission on the Future of American Higher Education issued a report in September 2006 amid a firestorm of controversy. A key theme of the Commission's report was that the student financial-aid system in the U.S. is not functioning well because it is too complex, non-transparent and not targeted on the needs of the lowest income students.

The report found that although U.S. participation rates have traditionally been among the highest in the world, the proportion of students who complete the program they began shows the U.S. has had a mediocre record, with only half of the students completing a four-year degree, and a much lower rate in community colleges.

The Commission's focus on low degree-completion rates has led to a growing debate on a related subject, namely, the U.S. ranking in attainment rates – the proportion of the adult population with a post-secondary degree of some sort. The U.S. continues to have the highest rates of attainment for bachelor's degrees, with 30 per cent of the adult population holding such a degree – the OECD average is 19 per cent – although a number of countries are catching up. But in the attainment for associate's degrees from community colleges, the U.S. has been in the middle of the pack with roughly 10 per cent of the adult population holding associate's degrees (OECD average is nine per cent). When the rates for both types of degrees are combined and the trends over time are examined – by looking at differences among different age groups – the U.S. position lags behind that of many countries.

It is now clear that the faulty system of student financial aid, the lack of student success, and the need to examine what students learn and to improve quality will be central to the debate on higher education in the U.S. for the foreseeable future. These topics, of course, have been the subject of extensive debates before, but with little to show for it. Maybe this time, with the intense focus on global competition, the result will be different. 

CANADA [FROM PAGE 24]

Thus several provinces have instituted quality assurance bodies. All are concerned that student mobility is unduly hindered by the lack of intra-provincial systems for transferring credits for courses. Canada has been relatively slow in developing quality assurance and course credit transfer mechanisms.

Ottawa and Provinces Argue, Then Agree

In the field of higher education, much of the highly decentralized formal nature of the Canadian arrangements must be attributed to the insistence by Quebec that education is exclusively the concern of the provincial government. But \$9 billion per year in various forms of federal support for purely provincial institutions is not to be disregarded, so provincial governments have developed reasonable levels of coordination, all the while incorrectly insisting that the federal role is, at most, a minor one.

Canada views research as one of the major keys to economic advancement, and believes that support of university-based research is a legitimate area of federal activity. And since research is strongly concentrated in universities (as much or more than in any other advanced country), this has meant a major role for the federal government. As a result, over 80 per cent of public support for university research in Canada comes from the federal government.

Two other major areas of federal support for higher education are student assistance and intergovernmental transfers. Federal student loan programs supplement provincial student support schemes in all provinces to the tune of approximately \$2 billion per year. In addition, the federal government provides tax relief for interest payments on all student loans and savings incentive programs for higher education. Federal and provincial officials have worked out protocols and procedures to work together. Intergovernmental transfers for higher education are paid separately from other social transfers and unconditionally. However, in the federal budget of March 19, 2007, a 40 per cent increase was promised for the next fiscal year, dependent upon the federal government being satisfied that all the money is going to higher education.

Working Without a Federal Minister

In Canada there are no formal consultative and planning mechanisms to attempt coordination and there is not a federal minister of education charged with working with the other levels of government. Yet, while the systems(s) are far from perfect, they appear to work effectively, providing a high standard of education to a large proportion of the Canadian population and sustaining successful research programs. The paradox is all the greater since, at a formal level, the Canadian Council of Ministers of Education, nominally the highest-level coordinating mechanism available, consists only of provincial ministers and it excludes attendance by any federal minister.

In fact, the outcome has been one of effective informal coordination. To some degree, this coordination is done by the higher-education institutions themselves. Also to some degree, it reflects the ability of Canadian bureaucrats to plan together, sometimes despite their political masters. It is also reflective of the insistence of the Canadian polity that the Canadian federal system must, in the end, deliver results. 