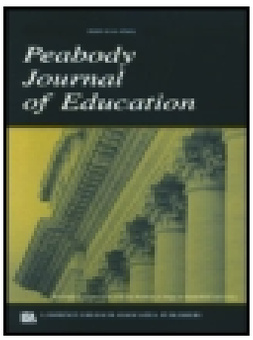

Peabody Journal of Education

ISSN: 0161-956X (Print) 1532-7930 (Online) Journal homepage: http://www.tandfonline.com/loi/hpje20

International Education: A Retrospective

Stephen P. Heyneman

To cite this article: Stephen P. Heyneman (2003) International Education: A Retrospective, Peabody Journal of Education, 78:1, 33-53, DOI: 10.1207/S15327930PJE7801_3

To link to this article: http://dx.doi.org/10.1207/S15327930PJE7801_3

PEABODY JOURNAL OF EDUCATION, *78*(1), 33–53

International Education: A Retrospective

Stephen P. Heyneman
Peabody College
Vanderbilt University

The philosophic underpinnings of public education were established in France by Francois Guizot (1787–1874), in New England by Horace Mann (1796–1859), and in the Netherlands by Petras Hofstede de Groot (1802–1886). Since the beginning, however, there have been international comparisons with an eye toward improving local strategies and methods (Heyneman, 2000b), and all great colleges of education used the study of international education to expand the horizons of local teachers and administrators whose views of their profession were sometimes narrowly confined to parochial interests.

A 1960s course on international education at the University of Chicago included a series of readings that seemed to fall into studies like the following:

- Studies of some 19th-century travelers, for example, Horace Mann, Mathew Arnold, and Joseph Kay, who brought back impressions of education in foreign lands for domestic consideration.
- Individuals who tried to systematize the results of these kinds of impressions, including Sir Michael Sadler, Isaac Kandel, and George Bereday.
- A study of great minds drawn from philosophy or from the social sciences in general, such as Plato, Leo Tolstoy, Max Weber, Emil Durkheim,

Requests for reprints should be sent to Stephen P. Heyneman, Peabody College, Department of Leadership, Policy, and Organizations, 134 Magnolia Circle, Payne 202, Vanderbilt University, Nashville, TN 37203. E-mail: s.heyneman@vanderbilt.edu

Clifford Geertz, Edward Shils, Stuart Eisenstadt, and David Apter, that were of interest not only to comparative education but also to many other lines of inquiry. Either they had thought about education or were contributors to compelling theories in which education played a role—in modernization, tradition, center and periphery, economic development, civic culture, and stratification.

- People who had begun to measure and estimate what it was about education that seemed to make a difference in society, including, for example, Philip Foster, Torsten Husen, Alex Inkeles, Yuri Bronfenbrenner, Edward Denison, and John McClelland. Their purpose was to study education as though it were like any other social function—religion, law, or medicine, for instance. They were curious about whether education's role and function were similar around the world and why.
- Individuals who helped plan education's effects, including Fredrick Harbison, Charles Myers, Neville Postlethwaite, Benjamin Bloom, Charles Havighurst, James Coleman, C. Arnold Anderson, and Mary Jean Bowman.

These people constituted the literature 25 years ago. The field, however, was greater. Meetings of the Comparative and International Education Society were attended by representatives of various foundations and public agencies who took a keen interest in the field and the society itself. The conferences included scholars from anthropology, political science, public administration, comparative literature, sociology, and regional area studies—Africa, Asia, Latin America, and the Middle East—linked by a common interest in education.

A quarter of a century later, the major interdisciplinary programs at Stanford University and at the University of Chicago have closed, and the level of international development assistance to education in developing countries continues has declined (Heyneman, 1993, 1995, 1997, 1999a). Is there less interest in the field than 25 years ago? Is international education at risk? Where is international education headed?

International Education: More but Different

There is more written today concerning international education than there was 25 years ago. One reference system of public policy issues shows 34 entries on international education in the 1970s, and 155 entries

10 years later, a fivefold increase.[1] Another reference system, which includes formal articles and publicly presented papers, shows a substantial level of production of 2,478 entries in the 1970s, compared to 2,125 entries 10 years later.[2]

Both systems exclude the many and varied internal reports from public agencies. There were 33 World Bank education sector reports produced annually during the 1970s and four times that level (123) 10 years later and six times that level (200) 20 years later. The number of reports went from 1 in 1972 and 1975, to 10 in 1977, to 12 in 1978, to 17 in 1981 and 1985, and to a high of 24 in 1992. The current average is about 20 per year.[3]

The U.S. federal government changed, too. Out of over 3,000 research projects sponsored by the federal government on adolescence and youth in 1974, only 1 report had anything to do with international education (Heyneman, 1974). Moreover, the sponsoring agency (the National Institute of Education) made some effort to underplay its existence for fear of being scrutinized by a congressional committee as being frivolous (Heyneman, 1993).

For education, the rise in oil prices in 1974 became a second sputnik. Rightly or wrongly, it was widely believed that the United States was behind in some fundamental way, motivating local demands for more information. These came, for instance, from the offices of state governors in Tennessee, South Carolina, Kentucky, and Washington. Questions about international information began coming from the National School Boards Association, the National Governors Association, the National Educational

[1]Included in these counts are articles classified both under comparative education and under international education. Excluded are articles under the topics of cross-cultural studies, educational anthropology, nonformal education, international educational exchange, and foreign culture.

[2]Missing were any references to comparative education as a methodology distinct from other social sciences. I suspect that this was not out of disregard for the need to understand methods; rather, it was on grounds that good methods and compelling questions could speak for themselves; there was no need to worry whether the methods in our field were sufficiently distinct. On reflection, this was an attitude similar to that of a current advertisement for a popular sports shoe: No need to talk about it, "Just do it."

[3]The cost of World Bank education sector work amounts to about $25 to $50 million per year. The Inter-American Development Bank, the Asian Development Bank, the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the United Nations Children's Fund (formerly the United Nations International Children's Emergency Fund, UNICEF), and other international organizations sponsor similar reports. Reports cover issues of curriculum development, instructional materials, teacher training, education finance, employment, labor markets, poverty, internal efficiency, educational materials, selection examinations, and equity.

Association, the American Federation of Teachers, the Council of Chief State School Officers, and the National Association of Manufacturers. This demand for answers to "What's wrong?" led to the publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983), which led to a significant increase in the demand for more international information on education and more reliable information.

The year after the publication of *A Nation at Risk,* there was an acrimonious meeting of the board of directors of the Center for Education Research and Innovation (CERI). The U.S. delegate put a great deal of pressure on the Organization for Economic Cooperation and Development (OECD) to be engaged in a project collecting and analyzing statistical education inputs and outcomes—quantifiable information on curricular standards, costs and sources of finance, learning achievements on common subject matter, employment trends, and the like. The reaction among the staff of CERI was one of shock and suspicion. Many thought that generalizations about education were confined to individual cultures, and hence it was unprofessional to try to quantify education processes or results. They believed that the process of quantification would oversimplify and misrepresent a nation's educational system. Perhaps more importantly, some suspected that the demand for such information would shift as soon as the political party of the U.S. president changed.[4]

A common European mistake has been to rely primarily on traditional central ministries of education for information. Europeans traveled to do primary source research on education in the United States only sparingly, and they often assumed that the structure and policies were settled in a manner closely resembling their own experience.

The point is that today this common European mistake is less common. In the last quarter century, there has been a growth in demand and in sophistication concerning international educational information on both sides of the Atlantic. From the European side, they learned that the demand for better and more reliable data was not coming exclusively from a single president or a single political party. It was coming, in fact, from educational consumers and grassroots interests, from parts of the

[4]Many other reports followed this one. Among them were *Educating Americans for the 21st Century: A Plan of Action for Improving Math, Science and Technology for all American Education and Science Students so That Their Achievement Is the Best in the World by 1995* (National Science Board Commission on Pre-College Education in Math, Science, and Technology, 1983), *Memorandum to the 41st President of the United States* (Commission on National Challenges in Higher Education, 1988), *A Place Called School: Prospects for the Future* (Goodlad, 1984), *High School: A Report on Secondary Education in America* (Boyer, 1983), *A Nation Prepared: Teachers for the 21st Century* (Task Force on Teaching as a Profession, 1986), and *What Works? Research About Teaching and Learning* (U.S. Department of Education, 1987).

society and the educational system over which Washington had no control and to which political leaders in any democracy had no choice except to respond.

Today, the OECD publication on education indicators is now published in French and English and constitutes the most widely circulated publication in OECD history (OECD, 1992). New projects have been launched on academic achievement, adult literacy, and the use of technology in education. Supported by the World Bank and the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the World Education Indicators project now includes 17 non-OECD countries, including China, Brazil, and India, allowing the OECD indicators to claim that they are now representative of the majority of the world's education systems.[5]

There have been four Nobel prizes awarded dealing with human capital issues.[6] There has been a recent flurry of reports on the status of education by international agencies (Carnoy, 1992; Hawes, Coombe, Coombe, & Lillis, 1986; Inter-Agency Commission, 1991; International Development Research Centre & Canadian International Development Agency, 1982; International Labor Office, 1989; Singapore Minister of Education, 1987; Thorsby & Gannicott, 1990; UNESCO, 1991; UNICEF, 1992; United Nations Children's Fund, 1990; United Nations Development Program, 1990; World Bank, 1988, 1990, 1991).[7] There have been two meetings of heads of state on international educational issues.[8] There are three new educational boards of the U.S. National Academy of Sciences and major new research initiatives from the General Accounting Office[9]; the Office of Technology Assessment (U.S. Congress Office

[5]This process of feeling demand is currently mirrored by the lack of pressure on UNESCO to improve its Office of Statistics. It is not a priority among the ministers of education, particularly in the many developing countries that make up the majority of the voting bodies. But I predict a turnabout in UNESCO, similar to what we have seen in OECD and probably for similar reasons, namely that the pressures on ministries of education will shift in countries around the world as they have in OECD countries.

[6]Edward Dennison, Jan Tinbergen, Theodore W. Schultz, and Gary Becker.

[7]These reports parallel others on population, family planning, poverty, social impact of adjustment, women in development, and environment, all of which have major sections dedicated to comparative education issues.

[8]The Education for All meeting in Jomtien, Thailand, March 5–9, 1990, and the World Summit for Children in New York, September 29–30, 1990, resulted in the adoption of a *World Declaration on the Survival, Protection, and Development of Children* and a *World Declaration on Education for All.*

[9]The three National Academy of Sciences' boards include Postsecondary Education and Training for the Workplace, Comparative Studies in Education, and Testing and Assessment. International issues figure prominently in each board. The General Accounting Office initiatives include international studies of educational management and the international experience in making human capital investments at earlier rather than later stages of the life cycle.

of Technology Assessment, 1992); various congressional committees[10]; and the Carnegie, Spencer, Ball, and Soros foundations. There is an ongoing cooperative effort among the donors to support African education. This is, of course, in addition to the many new efforts in Europe and Asia. The Japanese initiated an important fund to assist human resources in developing countries. The ministers of education of Asia and North America have decided to pool resources on projects related to curriculum requirements and teacher certification.[11] These resources are not classified as foreign aid; instead, they come out of line ministry education budgets. This is also characteristic of the Dutch CROSS (Coordination Dutch-Russian Cooperation in Education) Program designed to assist Russian education. It is justified on grounds that Dutch educational officials have something significant and unique to offer the Russians in the fields of educational management, publishing, and assessment of learning achievements and examinations and standardized testing and that the Dutch can themselves learn equally from the cooperative effort. The British Council is also assisting Russian educators with studies and analytic resources. The British Know How Fund is assisting Eastern Europeans with studies of the Textbook Sector; the Swedish and the American Academies of Sciences are assisting higher education and research capacity in the former Soviet Union, as is the European Community. Perhaps unique, though, is an effort led by the chancellor of the State University of New York to provide high-quality advice in comparative education to the minister of higher education in Russia.

These efforts, and the many publications rapidly emerging from them, are not isolated. From a low point of the National Institute of Education's fear that their one comparative education project would be seen as a boondoggle in 1974 has emerged a new industry of international education initiatives and projects.[12]

[10]At least four pieces of educational legislation are currently under debate, each making references to international education ideas, and there are a variety of new subcommittees studying specialized problems, one of the most active being the Subcommittee on Time and Learning.

[11]The Asia and Pacific Economic Conference has 14 members in their Human Resources Department: the United States, Canada, the People's Republic of China, Australia, Hong Kong, Indonesia, Japan, Korea, New Zealand, Taiwan, Thailand, Brunei, Malaysia, and the Philippines.

[12]Within the National Center for Educational Statistics, annual spending on international studies had risen from U.S. $165,000 in fiscal year 1988 to $10 million in fiscal year 1993.

Quality of International Education Information

The international education questions coming from public authorities reveal new sophistication. No longer is thinking confined to why Johnny cannot read as well as Ivan. No longer are the interests of public officials confined to that of an Olympic finish. This increasing sophistication is not uniform, but the kind of questions now being asked covers a much wider spectrum of comparative educational endeavors than at any time in my experience. The staffs of congressional committees ask increasingly about teaching and organizational techniques, types of salary incentives, and the methods of teaching children racial and ethnic tolerance. Questions concern the arts, the system's finance and management, morals, culture, language, and ethnicity. It is now (almost) normal for U.S. political figures to appreciate that political leaders and educators from other countries are not necessarily interested in the exact same questions and problems that interest Americans. Only infrequently does one find the marble syndrome of educational politics (if they are not interested in my game and my rules, I go home); rather, there is an appreciation that educational research and the gathering of educational statistics is a natural and normal part of diplomacy. The United States remained in an (expensive, publicly financed) international study of computer literacy, though it was felt there was not very much to learn from other countries, because it was felt that other countries wanted to learn from us. Similarly, the United States lowered its expectations of international research on educational standards with the Asian and Pacific Economic Conference in lieu of the Asian need to learn about moral education and the teaching of national consensus building. It is now understood that the Japanese may wish to learn about diversified curriculum from us, that the Russians wish to learn about the teaching of democracy with a heterogeneous school population, and that all societies want to know more about techniques of local management and local finance—all areas in which the United States is not behind.

Is it possible that Americans are showing signs of international tolerance and understanding in the field of education? Is it possible that Americans are coming out of their long-held tradition of localism and educational isolationism? It may be too early to make firm conclusions. But the diversity and sophistication in the kinds of questions being asked by public authorities has increased so dramatically that at times one has the sense that almost every social science issue on the reading of 25 years ago seems to be coming of age and into maturity—civic culture and governance, the complexity of human capital theory, stratification

and cultural integration, and the need for tradition as well as economic development. In every sense of the term, the Age of Aquarius for international education has dawned.

Why Interest in International Education Is Growing

Some changes come about suddenly and have an immediate worldwide impact. Friedman suggests that this is the case with respect to the Internet. Other changes are glacial in the speed by which they are recognized; yet in terms of impact, they are no less profound (Friedman, 1999). Such is the case with respect to education issues and their shift from local to international relevance.

Significant shifts have affected the governance of education and, hence, the character of international education. These shifts include the following:

- The globalization of social and economic forces
- The shift to mass education, including mass higher education
- The spread of democracy to new areas of the world
- The mismatch between education objectives and fiscal capability
- The demands placed on the systems to attract high-level talent in terms of international students and faculty
- The exigencies of technology
- New efforts to systematically provide sources of cross-national statistical information
- The pressures to create a level playing field in terms of international trade in education services
- The new demands for education to influence social cohesion

In the 1970s and 1980s, governments often determined economic investments, and foreign aid frequently was the dominant source of development capital for middle- and low-income countries. Today, transfers of private capital far outstrip public investments. A future computer manufacturing plant might be located in Nashville, Tennessee, Northern Ireland, or southern Italy; a textile plant in Bangalore or Senora; and a farm for winter fruit in Florida or Chile. What determines the choice of where to invest? Investment capital flows to one or another location on the basis of many factors—taxation policy, freedom to repatriate profit, labor productivity, labor cost, and social stability. The latter three are heavily influenced by education and by the success of local education systems. Hence, the demands for economic growth

and prosperity help determine that pressures on education systems to perform are similar.

Central education representatives in the 1960s were often the sole representatives. Today, education is frequently a decentralized activity with many new decision makers. Local authorities increasingly drive budgets and policy priorities. This is particularly evident in Brazil, Mexico, India, Russia, Nigeria, and other federal systems, but it is also evident in France, Indonesia, and Malaysia, which had been traditionally centralized. Local states and communities increasingly evaluate their own program innovations, initiate their own research projects, and review their own policies. Local or administrative initiative is often a leading force in centralized education systems as well. Local business and community groups, industries, and nongovernmental organizations increasingly influence policymakers as well as educational authorities. In higher education and private education in which policy decisions are progressively more the responsibility of individual institutions, these institutions are involved in international relations on their own. Educational software companies, publishers, and corporate training firms are ever more active and are demanding new and current information on the size of the educational markets in many countries. Taken together, these new categories of participants have deeply affected the vision and expressed interests of the traditional education authorities.

The Influence of Democracy on Educational Governance

Under autocratic governments, there was little need to explain education policy to the public. Educational policy consisted of edicts of intent and orders for administrative action that may or may not have been carried out effectively. Mechanisms for public debate did not exist. The performance of educational institutions was not open to public scrutiny. Data and other information on program effectiveness were not required. The curriculum was imposed; the goals of civics and history were decided unilaterally. If problems occurred, public officials were not held accountable.

New democracies have emerged in South Africa, Europe, Central Asia, Latin America and the Caribbean, and East Asia. With democracy, the exigencies of educational management shift. The effectiveness of educational institutions is open to public scrutiny for the first time, and education policy is the subject of heated public debate. Education policy now requires public *ex ante* awareness and consensus. Institutions must now compete for new resources, new faculty, and new curricula to keep abreast of quickly changing public demands.

Educational systems in the new democracies are faced with problems even more serious than that of efficient management. In many countries, curricular authority has been localized to the region or the local school. In some instances, such as in Bosnia, this has led to serious disagreements over the role of the school itself. Such disagreements have included the content of history and civics, the use of pedagogy counterproductive to interethnic harmony, and barriers to the equality of educational opportunity of particular ethnic and social groups. In many instances, schools and school systems have been engaged in performing functions exactly the opposite of their traditional intent. Instead of resolving differences across social groups, schools have been used to exacerbate those differences.

The Influence of Financial Austerity on Educational Governance

School systems differ from one country to another, but all share certain characteristics. All school systems share the universal struggle to balance the rapidly changing demands for improvement with the equally problematic realities of fiscal constraints—a permanent and unsolvable dilemma. The demand for mass access, higher levels of equity (for the socially excluded), and higher quality (for everyone) inevitably exceeds financial capacity. These universal demands make all schools and all school systems conscious consumers of educational policy innovations. The key difference today, from 2 decades ago, is the growing recognition that relevant innovations may emerge from anywhere. The only relevant innovations are not necessarily local or even domestic. This new era in international education is led by the burgeoning realization from active consumers—teachers, school and university managers, and system administrators—that their success may well depend on having the most compelling innovations, and that they are quite capable of making their decisions on whether geographical origin is a critical factor or not.

As a result, new policies have become common in widely disparate localities—quality and relevance of teaching materials procured from an open and competitive market, a professional force in which more effective teachers receive higher compensations, research allowing for transparent comparisons available to the public, and financing from multiple sources maximizing local investment without abrogating equity. Educational managers around the world now focus on these common problems—school-based management, teacher incentives, multicultural education, civic responsibilities, tracking, curriculum depth, individualized instruction, fair testing and assessment, special learning problems, and communications with the public.

Higher education is now mass education and no longer for the elite. In the 1960s, in no country in Western Europe was more than 9% of the age cohort enrolled in higher education, yet today no country enrolls less than about 35% of the age cohort. The shift has been associated with common, if not identical, fiscal and administrative pressures. These in turn have generated demand for creative policy reforms. Demand exists for innovations in institutional efficiency in terms of student-to-faculty ratios, judicious use of new technologies, efficiency in generating contractual outsourcing of traditional functions, department-based dollar budgeting, marketing of university copyrights, and attention to the problems of international trade in education commerce.

In terms of size, the U.S. education system accounts for less than 5% of world enrollment (Figure 1). Together, industrialized countries account for about 17%. Eighty-three percent of the world's enrollments are located in the middle-income and developing countries, with 57% enrolled in East and South Asia. Each area is changing rapidly. As economies grow, more is spent on students (Figure 2). Unit expenditures across the world doubled between 1980 and 1994, but different regions showed different rates of growth (Table 1). Expenditures doubled in the United States but increased by 135% in Europe and 200% in East Asia. In terms of challenges and dilemmas, the world's education systems share more today than ever before.

These common challenges imply several things. First, the demand for innovative policies in education is growing rapidly, and their source is no longer confined to one country's experience. This is particularly important for the United States, which has a high demand for policy innovation, yet a small portion of the world's education experience from which to draw lessons. To attain excellence today, the education profession must keep abreast of relevant innovations and educational experience from wherever it derives.

But these trends imply something else as well. With the common decentralization of decision making, the client for educational research and policy innovation is not limited to central or public authorities. There are many different demands for good ideas and information, and therefore, many different clients decide what is relevant. Local school officials in Minnesota have opted to join international studies of academic achievement so they might compare their educational performance with Sweden and Singapore. The American Federation of Teachers has studied the degree to which American high-stakes tests compare with those in Europe and Asia (American Federation of Teachers and the National Center for Improving Science Education, 1994). This illustrates that traditional notions that what is relevant to local school systems is

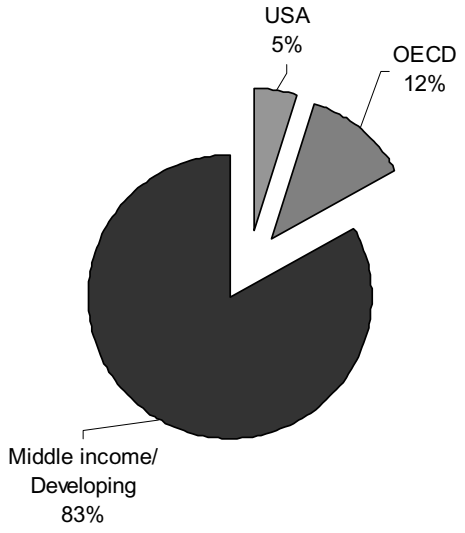

Figure 1. Distribution of elementary and secondary students by category of economic development. *Note.* World total = 1 billion children enrolled of the 1.5 billion in the 5–18 age group.

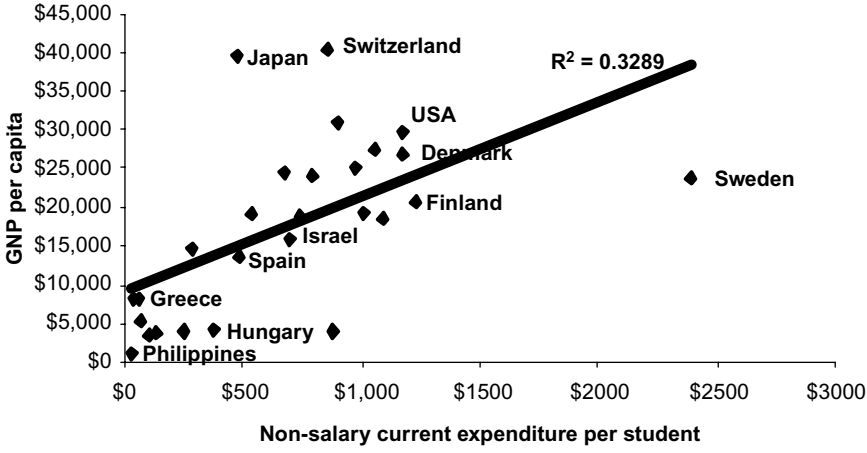

Figure 2. As economies grow, more is spent on goods and services per student.

Table 1
Large Growth of Education Expenditures per Region

Continents, Major Areas, and Groups of Countries	*Public Expenditure on Education per Inhabitant ($)*				*Percent Change 1980–1994*
	1980	*1985*	*1990*	*1994*	
World Total	126	124	202	252	100
Africa (North and SSA)	48	40	41	41	-15
America	307	375	521	623	103
Asia	37	39	66	93	151
Europe	418	340	741	982	135
Oceania	467	439	715	878	88
Industrializing countries	31	28	40	48	55
SSA	41	26	29	32	-22
Arab states	109	122	110	110	1
LAC	93	70	102	153	65
EAP	12	14	20	36	200
South Asia	13	14	30	14	1
Poorest countries	9	7	9	9	0
Industrialized countries	487	520	914	1211	149

Note: SSA = SubSaharan Africa; LAC = Latin America and the Caribbean; EAP = East Asia and Pacific. *Source: UNESCO Statistical Yearbook,* 1998.

constantly being retested with new information but is also in the hands of an increasingly diverse set of local educational clients and decision makers.

In terms of challenges and dilemmas, the world's education systems share more today than ever before. This implies two things. (a) The demand for innovative courses on education is rapidly growing, and graduate schools of education need to respond to this demand quickly. (b) Creative research and policy innovations, relevant for improvement of U.S classrooms, can no longer be limited to the United States. To be world class, a graduate school of education must now keep up to date on relevant innovations and educational experience from a multiplicity of educational venues.

The Influence of International Students on Education Policy

There were only 50,000 international students in the United States in 1960. The number of international students in the United States in 2001 grew by 6%, and now at 549,000, it is a record high (Figure 3). Last year

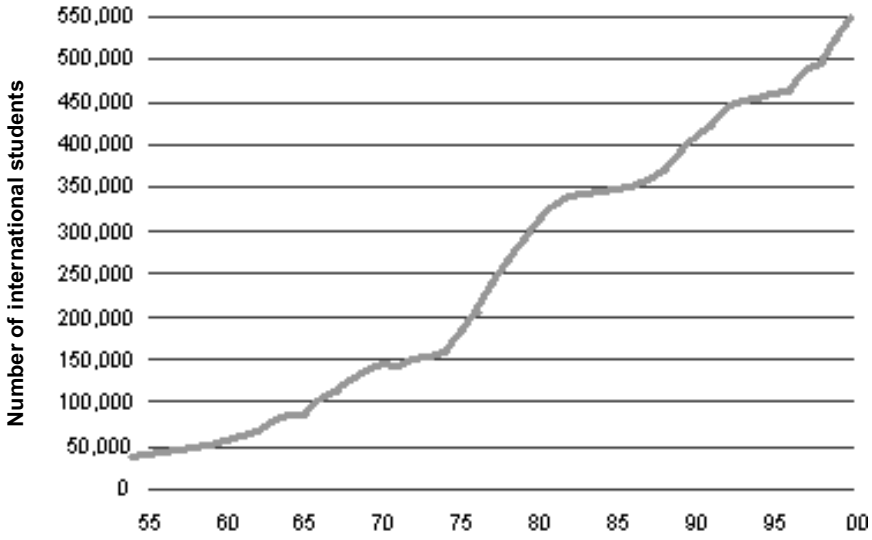

Figure 3. Total international enrollment in the United States, 1954–2001. *Source:* Open Doors International, 2001.

expenditures on tuition and fees by international students in the United States reached $11 billion. Of those expenditures, approximately 66% are derived from personal and family sources. At the undergraduate level (i.e., for 254,000 students) family support accounted for 81% (Table 2). Although American higher education may be expensive by world standards, a large number of families outside the United States can afford it. Because of its potential, international education is now classified as a traded service by the Department of Commerce and is today the nation's fifth-largest service export.

More than one half of the foreign students in the United States come from Asia, with students from China and India together accounting for about 21% alone (Table 3, Figure 4). Most are in the United States to study for utilitarian purposes. The proportion studying humanities is only 2.9%, fine arts, 6%, and social sciences 8%. Almost one half of the foreign students are crowded into three fields: 20% in business management, 15% in engineering, and 13% in mathematical and computer sciences. Human resources are becoming more popular, with health at 4% and education at 3% of the total (Table 4). Just as demand is growing for students to study in the United States, demand by American students to study abroad, even temporarily, is growing. From 45,000 per year in 1985, the number of

Table 2

International Students in the United States—Source of Funds

Primary Source of Funds	*All Foreign Students*	*% of Undergraduate*	*% of Graduate*	*% of Other*
Personal and family	66.9	80.7	46.9	65.2
U.S. college or university	19.8	8.4	39.9	6.1
Home government or university	4.0	3.6	4.5	3.9
U.S. private sponsor	2.5	2.8	2.3	1.0
Foreign private sponsor	2.4	2.7	2.1	2.1
Current employment	2.4	0.4	1.4	18.9
Other sources	1.9	0.6	1.4	1.3
U.S. government	0.6	0.4	0.9	0.8
International organization	0.4	0.3	0.5	0.8
Total number of students	547,867	254,429	238,497	54,941

Source: Open Doors International, 2001.

Table 3

International Students in the United States—Leading Countries

Place of Origin	*1999–2000*	*2000–2001*	*% Change*	*Scholar Total*
World total	74,571	79,651	6.8	
China	13,229	14,772	11.7	18.5
Japan	5,460	5,905	8.2	7.4
Republic of Korea	5,015	5,830	16.3	7.3
India	4,929	5,456	10.7	6.8
Germany	5,016	5,221	4.1	6.6
Canada	3,578	3,735	4.4	4.7
United Kingdom	2,916	3,352	15.0	4.2
Russia	3,195	3,253	1.8	4.1
France	3,076	3,154	2.5	4.0
Italy	2,108	2,226	5.6	2.8
Spain	1,729	1,706	−1.3	2.1
Brazil	1,273	1,315	3.3	1.7
Australia	1,090	1,212	11.2	1.5
Israel	1,108	1,205	8.8	1.5
Taiwan	1,200	1,196	−0.3	1.5
The Netherlands	978	1,037	6.0	1.3
Turkey	898	918	2.2	1.2
Mexico	959	898	−6.4	1.1
Poland	805	862	7.1	1.1
Switzerland	774	767	−0.9	1.0

Source: Open Doors International, 2001.

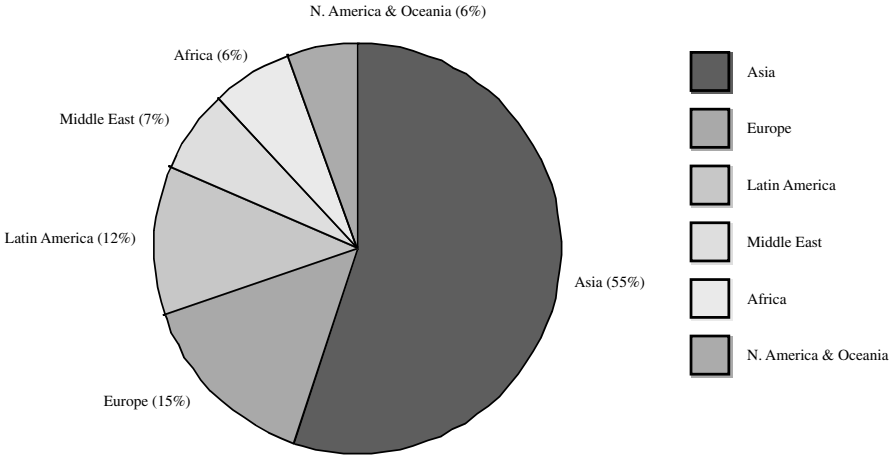

Figure 4. International students in the United States—place of origin. *Source:* Open Doors International, 2001.

Table 4

International Students in the United States—Field of Study

Field of Study	*1999–2000 Foreign Students*	*2000–2001 Foreign Students*	*% of Total*	*% Change*
Total	514,723	547,867	100.0	6.4
Business and management	103,215	106,043	19.4	2.7
Engineering	76,748	83,186	15.2	8.4
Mathematics and computer sciences	57,266	67,825	12.4	18.4
Other (general studies, communications, law)	53,195	57,235	10.4	7.6
Social sciences	41,662	42,367	7.7	1.7
Physical and life sciences	37,420	38,396	7.0	2.6
Undeclared	32,799	35,779	6.5	9.1
Fine and applied arts	32,479	34,220	6.2	5.4
Intensive English language	21,015	23,011	4.2	9.5
Health professions	21,625	22,743	4.1	3.7
Humanities	16,686	16,123	2.9	3.4
Education	12,885	14,053	2.6	9.1
Agriculture	7,729	7,200	1.3	6.8

Source: Open Doors International, 2001.

American students seeking to study abroad is about 140,000 per year (Figure 5). These figures reflect high demand. But is the demand for higher education institutions in the United States as high as it is for higher education institutions outside the United States? In other words, in terms of

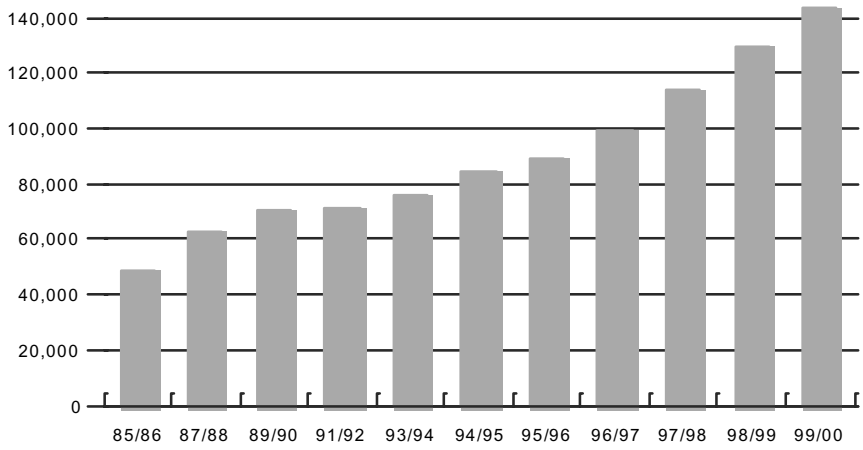

Figure 5. U.S. study-abroad students, 1985–1986 to 1999–2000. *Source:* Open Doors International, 2001.

attracting international students, does U.S. higher education continue to be competitive with higher education elsewhere?

In fact the trade in higher education outside the United States is growing faster. Over the last 10 years, the share of international students studying within the United States has dropped from 40% to under 30%. And as a proportion of the overall student population, the international student population in the United States (3.9%) is not that much greater than it was in 1954 (1.4%). As a percentage of the overall student population in fact, the United States ranks 12th among OECD countries. The international student proportion in Switzerland is 16%; it is over 12% in Australia, about 11% in Britain, about 8% in Germany, and about 9% in France (Figure 6).

These figures suggest that international education is now openly competitive and that the United States does not have as large an advantage as it once did. The figures would also suggest that as a proportion of the overall student population, the impact of the international students in the United States is modest by comparison to some of its trading partners.

Cross-National Sources of Statistical Information

In spite the inevitable political emphasis on the olympic nature of cross-national studies, countries are beginning to participate because the lessons derived have proven to be insightful and stimulating to new

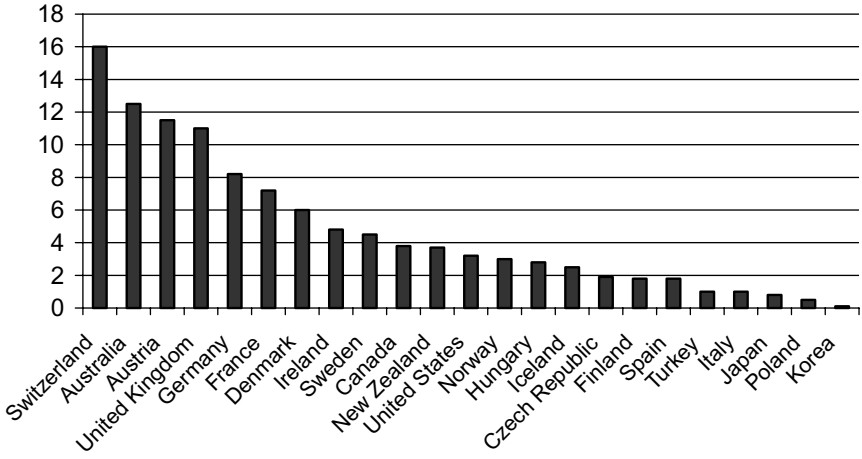

Figure 6. Percentage of tertiary students enrolled who are not citizens of the country of study—1998.

questions and ideas for improvement. Many have learned that the lessons in one country are not identical to the lessons elsewhere. With respect to the Third International Mathematics and Science Study (TIMSS), Americans drew conclusions about the curriculum being a mile wide and an inch deep (Schmidt, McKnight, Raizen, & TIMSS 1996), but Colombians drew conclusions about the range of age within each grade level; Latvians drew conclusions about differences between Latvian and minority students. All countries seemed to draw conclusions about the manner in which subject matter was sequenced. Moreover, it is common to sponsor reanalyses of the data sets, which often results in new insights. For instance, Americans must now ponder why their disadvantaged students perform worse than the disadvantaged in other participating countries and why school resources are more inequitably distributed than in other countries (Baker, 2002).

International standards have been greatly enhanced by the procedures and the results of cross-national studies. Achievement studies around the world have learned from the three different elements used in TIMSS: (a) what one expects to be learned, (b) what has been taught, and (c) what has been learned. The new studies have tried to include case examples and videotape episodes, as well as both cross-sectional and time-series surveys. This experience has helped mitigate the long-standing unproductive battles between quantitative and qualitative evidence; all evidence has its strengths and weaknesses, and those are now largely understood to be universal. International standards of data collection, reporting

quality control sampling the impartiality of questionnaire design, first proposed by the authorities within the United States, have now been established and widely accepted (National Academy of Sciences, 1993), and this has led to questioning and then strengthening of the international institutions that support education data collection and dissemination (Guthrie & Hansen, 1995; Heyneman, 1999b).

Future Issues

The institutional structure underpinning international education data collection remains fragile. There is no consensus about how financial support for international data collection should be obtained in a fashion that is fair to all countries. Now considered a trade good, education is the source of debate surrounding the World Trade Organization. How should education in international agencies be organized (Heyneman, in press, b)? Are there indeed barriers to the trade in education, or is education a cultural good falling within the purview of each nation independently (Heyneman, 2000a, 2001, in press; Heyneman & Taylor Haynes, in press)? It is clear that as a separate field of study, international education has shifted. No longer is it as viable as an esoteric field of study. Instead international experience is becoming a normal part of all fields of study—curriculum, administration, human development, and pedagogy. But graduate schools of education, particularly in the United States, are not well equipped to respond to this new set of demands and will have to undergo a significant, and perhaps painful, adjustment to catch up with the field itself.

References

American Federation of Teachers and the National Center for Improving Science Education. (1994). *What college bound students abroad are expected to know about biology: Exams from England and Wales, France, Germany and Japan, plus a comparative look at the United States.* Washington, DC: American Federation of Teachers.

Baker, D. P. (2002, May 24). *Should we be more like then? Reflections on causes of cross-national high school achievement differences and implications for education reform policy.* Paper presented at the Brookings Education Policy Conference, Washington, DC.

Boyer, E. L. (1983). *High school: A report on secondary education in America.* New York: Carnegie Foundation for the Advancement of Teaching.

Carnoy, M. (1992). *The case for investing in basic education.* New York: UNICEF.

Commission on National Challenges in Higher Education. (1988). *Memorandum to the 41st President of the United States.* Washington, DC: American Committee on Education.

Friedman, T. L. (1999). *The lexus and the olive tree: Understanding globalization.* New York: Farrar, Straus & Giroux.

Goodlad, J. L. (1984). *A place called school: Prospects for the future.* New York: McGraw-Hill.
Guthrie, J. W., & Hansen, J. S. (Eds.). (1995). *Worldwide education statistics: Enhancing UNESCO's role.* Washington, DC: National Academy of Sciences.
Hawes, H., Coombe, T., Coombe, C., & Lillis, K. (Eds.). (1986). *Education priorities and aid responses in Sub-Saharan Africa.* London: Overseas Development Administration.
Heyneman, S. P. (1974). Toward inter-agency coordination. *Annual report of the inter-agency panel for research and development on adolescence.* Washington, DC: Social Research Group, George Washington University.
Heyneman, S. P. (1993). Quantity, quality, and source of comparative education. *Comparative Education Review, 37,* 374.
Heyneman, S. P. (1995). Economics of education: Disappointments and potential. *UNESCO Prospects, 25,* 559–583.
Heyneman, S. P. (1997). Economic development and the international trade in education reform. *UNESCO Prospects, 30,* 501–531.
Heyneman, S. P. (1999a). Development aid in education: A personal view. In K. King & L. Buchert (Eds.), *Changing international aid to education: Patterns and national contexts* (pp. 132–146). Paris: UNESCO Publishing.
Heyneman, S. P. (1999b). The sad story of UNESCO's education statistics. *International Journal of Education Development, 19,* 65–74.
Heyneman, S. P. (2000a). Educational qualifications: The economic and trade issues. In A. Little (Ed.), *Assessment in education: Principles, policy, and practice (special issue on globalization, qualifications, and livelihoods)* (Vol. 3, pp. 417–439).
Heyneman, S. P. (2000b, summer). From the party state to multi-ethnic democracy: Education and social cohesion in Europe and Central Asia. *Educational Evaluation and Policy Analysis, 22,* 173–191.
Heyneman, S. P. (2001). The growing international market for education goods and services. *International Journal of Education Development, 21,* 345–361.
Heyneman, S. P. (in press, a). The knowledge economy and the commerce of knowledge. In G. C. Hentchke (Ed.), *Handbook of educational leadership and management.* London: Pearson Education.
Heyneman, S. P. (in press, b). Foreign aid to education—Recent U.S. initiatives: Background, risks, prospects. *Peabody Journal of Education.*
Heyneman, S. P., & Taylor Haynes, K. (in press). International uses of education technology: Threats and opportunities. In L. Mahlck & D. Chapman (Eds.), *Adapting technology for school improvement: A global perspective.* Paris: International Institute of Educational Planning.
Inter-Agency Commission. (1991). *Final report, World Conference on Education for All: Meeting basic learning needs, March 5, 1990, Jomtien, Thailand.* New York: Inter-Agency Commission (UNDP, UNESCO, World Bank).
International Development Research Centre & Canadian International Development Agency. (1982). *Financing educational development.* Ottawa, Canada: IDRC.
International Labor Office. (1989). *International labour report.* Geneva, Switzerland: Author.
National Academy of Sciences. (1993). *A collaborative agenda for improving international comparative studies in education.* Washington, DC: Author.
National Commission on Excellence in Education. (1983). *A nation at risk: The imperative on educational reform.* Washington, DC: U.S. Government Printing Office.
National Science Board Commission on Pre-College Education in Math, Science, and Technology. (1983). *Educating Americans for the 21st century: A plan of action for improving math, science, and technology for all American education and science students so that their achievement is the best in the world by 1995.* Washington, DC: National Science Foundation.

Organization for Economic Cooperation and Development (OECD). (1992). *The OECD international education indicators: A framework for analysis.* Paris: Author.

Schmidt, W. H., McKnight, C. C. Raizen, S. A., & Third International Mathematics and Science Study. (1996). *A splintered vision: An investigation of U.S. science and mathematics education.* Dordrecht, The Netherlands: Kluwer Academic.

Singapore Minister of Education. (1987). *Towards excellence in schools.* Singapore: Ministry of Education.

Task Force on Teaching as a Profession. (1986). *A nation prepared: Teachers for the 21st century.* New York: Carnegie Forum on Education and the Economy.

Thorsby, C. D., & Gannicott, K. (1990). *The quality of education in the South Pacific.* Canberra, Australia: National Centre for Development Studies.

U.S. Department of Education. (1987). *What works? Research about teaching and learning.* Washington, DC: U.S. Government Printing Office.

UNESCO. (1991). *World education report.* Paris: Author.

UNICEF. (1992). *State of the world's children, 1992.* New York: Author.

United Nations Children's Fund, Task Force for Child Survival. (1990). *Protecting the world's children: A call for action, WHO, UNICEF, World Bank, United Nations Development Program, Rockefeller Foundation primary education policy papers.* New York: Rockefeller Foundation.

United Nations Development Program. (1990). *Human development report.* New York: Oxford University Press.

U.S. Congress Office of Technology Assessment. (1992). *Testing in American schools: Asking the right questions.* Washington, DC: U.S. Government Printing Office.

World Bank. (1988). *Education in Sub-Saharan Africa: Policies for adjustment, revitalization, and expansion.* Washington, DC: Author.

World Bank. (1990). *Primary education policy paper.* Washington, DC: Author.

World Bank. (1991). *Vocational and technical education and training policy paper.* Washington, DC: Author.