

HIGHER EDUCATION AND THE NEW DEMOGRAPHICS

Questions for Policy

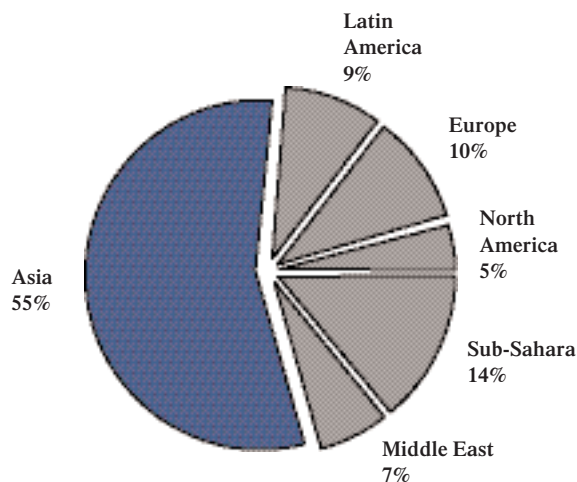
BY WATSON SCOTT SWAIL

For much of the last half of the 20th century, federal and state policies have focused on opening the doors of higher education to the underserved populations of America. The result has been a qualified success: more students from all backgrounds are attending college than ever before, but large gaps still exist in who goes where and who completes degree programs.

Low-income and first-generation students, as well as students of color, are less likely to attend four-year institutions and to persist through degree completion than are more advantaged students. As Congress prepares for the reauthorization of the Higher Education Act in 2004, its members will likely be cognizant of these facts and will focus their efforts even more on institutional accountability and the “success” side of postsecondary education.

The upcoming reauthorization occurs at a time when higher education is experiencing a historic shift. Demand for postsecondary study is at an all-time high for both students of traditional and nontraditional ages; for-profit and certificate-based providers are becoming more the norm than outliers; distance education is proliferating at all types of institutions; and higher education is becoming a global commodity traded across political and geographic boundaries.

Watson Scott Swail is director of The Pell Institute for the Study of Opportunity in Higher Education in Washington, D.C. He retains the copyright for this article.



Source: McCarthy, Kevin F. (1999) *World Population Shifts: Boom or Doom? A Rand Corporation Report*, p.16.

At the same time, colleges and universities are being pressed to serve a student body that is vastly different from only a few decades ago. The demographic trends widely forecast throughout the 1990s have become reality: California, Florida, and Texas are prominent states where traditional “minority” groups now constitute the majority. And on the heels of these demographic shifts, a dramatically different cohort of high school students is preparing for postsecondary study.

Recent analysis shows that this group of prospective students will be much less prepared for college than the current entering cohort. More specifically, the most rapid growth in the population will be among groups that are “traditionally more likely to drop out of school, less likely to enroll in college-preparatory course work, less likely to graduate from high school, less likely to enroll in college, and least likely to persist to earn a baccalaureate degree,” explains Samuel M. Kipp in his 1998 article “Demographic Trends and Their Impact on the Future of the Pell Grant Program.” (See Resources.)

Higher education is also going through significant changes stimulated by the rapid growth of the Internet, the increasing globalization of higher education, and the ever-pressing question of institutional and instructional quality. New modes of educational delivery through virtual networks are breaking the traditional mold of instructional pro-

vision. New players, new pedagogies, and new paradigms are redefining higher education. The rules are changing and there is increased pressure on institutions of higher education to evolve, adapt, or desist.

The nexus between these two major trends—unprecedented institutional evolution and dramatic demographic changes—raises important policy and practical questions at both the international and national levels. With respect to the former, what role will U.S. higher education play in a global market? Will U.S. institutions feel pressure to serve the growing world population? And how will the emerging competitiveness of a global market for higher education impact U.S. policy and practice?

On the domestic front, how will institutions act to meet the challenges posed by the new demographics? How will we keep higher education affordable? How will the country better prepare new kinds of students for postsecondary study? Who will be left behind in the competitive race, in terms of both citizens and institutions? And what will be the net impact of virtual instruction? What follows is an examination of these questions at the international and domestic levels.

LOOKING OUTWARD—THE EMERGING WORLD MARKET FOR HIGHER EDUCATION

World population growth and the globalization of economic markets have

had, and will continue to have, a major impact on U.S. higher education. Consider the following statistics. More than 6 billion people populate this planet, increasing at a rate of a billion every 12 to 13 years. By 2050, global population will increase half again, breaking the 9 billion mark (see McCarthy, in Resources).

In 2025, North America represents only 5 percent of this total (see Chart 1). Asia, in contrast, represents 55 percent of the global population and will experience a total population increase of over 1 billion people by 2025—14 times the increase of 73 million in North America.

In fact, North America will have the lowest population increase during the next half-century of any geopolitical area except Europe, which is now experiencing negative population growth. Latin America, the Middle East, and Sub-Saharan Africa will increase at rates that are two, three, and six times greater than that of North America.

Where the United States differs greatly from the rest of the world is in dollars and cents. The United States comprises more than two-thirds of the world’s total economy and had a per capita income of \$22,199 in 2000. In comparison, one in four individuals in the world lives on less than \$2 a day. The challenge resides in the fact that the greatest global population growth will occur in the lowest-income groups of these emerging nations (see U.S. Census Bureau and World Bank publications in Resources).

These population shifts have enormous implications for the United States with regard to responsibility and leadership. While the United States is changing, the world in which it is situated is changing at a much faster rate and in far more significant ways. Population projections show that the United States will continue to be the third-largest nation on earth (see Table 1). In fact, the top three countries in terms of population have remained remarkably constant over time: India, China, and the United States.

In 1950, other population powerhouses included Russia, Japan, Germany, the United Kingdom, and Italy—all nations known for their political power and highly articulated postsecondary education systems. By 2050, none of these countries will make the top 10. In their places will

TABLE I. TOP 10 RANKED NATIONS BY POPULATION, 1950, 2000, AND 2050

1950		2000		2050	
1 China	562,579,779	1 China	1,261,832,482	1 India	1,619,582,271
2 India	369,880,000	2 India	1,014,003,817	2 China	1,470,468,924
3 United States	152,271,000	3 United States	275,562,673	3 United States	403,943,147
4 Russia	101,936,816	4 Indonesia	224,784,210	4 Indonesia	337,807,011
5 Japan	83,805,000	5 Brazil	172,860,370	5 Nigeria	303,586,770
6 Indonesia	83,413,921	6 Russia	146,001,176	6 Pakistan	267,813,495
7 Germany	68,374,572	7 Pakistan	141,553,775	7 Brazil	206,751,477
8 Brazil	53,443,075	8 Bangladesh	129,194,224	8 Bangladesh	205,093,861
9 United Kingdom	50,127,000	9 Japan	126,549,976	9 Ethiopia	187,892,174
10 Italy	47,105,000	10 Nigeria	123,337,822	10 Congo (Kinshasa)	181,922,656

Source: U.S. Census Bureau, International Database; updated May 10, 2000. (www.census.gov/ipc/www/idbrank.html)

be countries like Indonesia, Nigeria, Pakistan, Bangladesh, Ethiopia, and the Congo. These are nations with economies and cultures that are dramatically different from those of the United States. The world in which we function, in short, is becoming a far different place.

These demographic changes have significant implications for U.S. higher education, and raise a number of important policy-related questions:

- **What role will U.S. higher education play in assisting these emerging markets?** The U.S. system of tertiary education is arguably the most accessible in the world. As a result, it has become the international standard-bearer for higher education. Because our campuses have long been viewed as the epitome of higher education, world leaders like the Secretary General of the United Nations have flocked to these institutions in order to prepare for the challenges ahead. Up until now, this has been a purely market-driven phenomenon: our premiere institutions appear to offer exceptional quality to the entire globe with respect to higher education.

As the rest of the world begins to move beyond elitism to full opportunity with respect to postsecondary access, the United States can also provide an example through its historic struggles to overcome segregation and to expand educational opportunity. These are new experiences for many nations, and the United States can show them the way. Just as it is important for the United States to lead the world in peace-keeping, it has a responsibility to provide

strategic support to developing nations in areas like higher education that help build a strong foundation for keeping the peace.

The U.S. Department of Education—much like its peers at the State Department or the Department of Commerce—has the potential to play an increasingly important role on the international stage. The United States has provided leadership in educational research on an international basis, as evidenced by the support of the Third International Mathematics and Science Study (TIMSS). A logical policy progression then, is to enhance our ability to provide additional support through the transfer of effective higher education planning, and organizational and instructional practices abroad.

- **Will these shifts in population put increasing pressure on U.S. institutions to serve overseas students?** It is doubtful that most U.S. colleges and universities currently feel greater pressure to serve overseas students than they did a decade ago. But many U.S. institutions have astutely recognized global developments as an emerging market for their products and services. Some “name brand” institutions (mostly private) already offer education abroad through satellite campuses, distributed-learning technologies, or both.

Many other less well-known U.S. institutions have followed this practice with offshore sites and distance-delivered programs that currently enroll far greater numbers of overseas students than the elites. The enhancement of distributed-learning technologies—

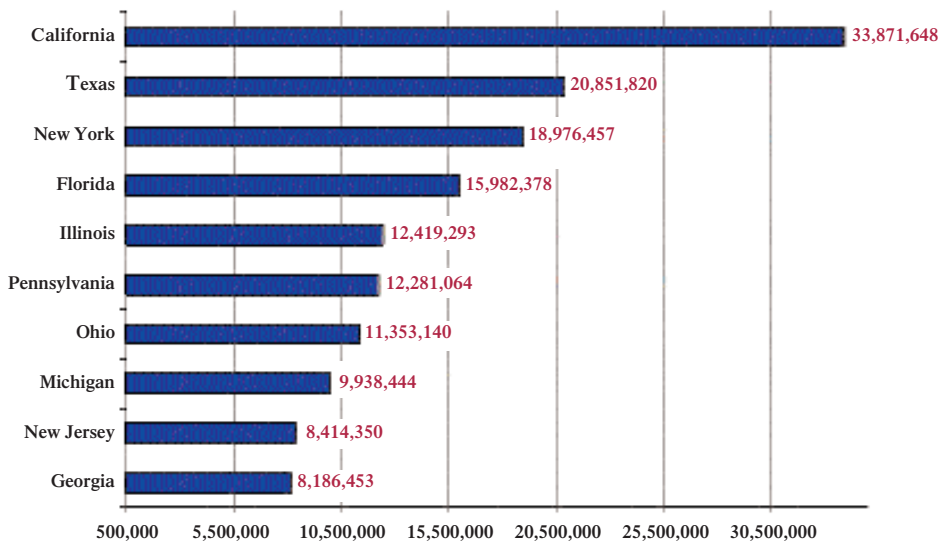
most notably Internet or Web-based instruction—has greatly facilitated this expansion.

Until now, it was reasonable to assume that these opportunities would cater primarily to the upper or upper-middle classes in these countries—those willing and able to pay the real costs of attendance. These are, after all, full-cost-recovery (or even profit-making) operations for most of the institutions involved.

But more affordable opportunities made possible by new technologies will likely make their way to the global market, creating a new stratum of American higher education abroad. While the international elite will continue to attend our top institutions in person—simply because they can afford the luxury—others will likely attend via an expanding array of virtual campuses to obtain a quality educational experience and an “American-brand” degree.

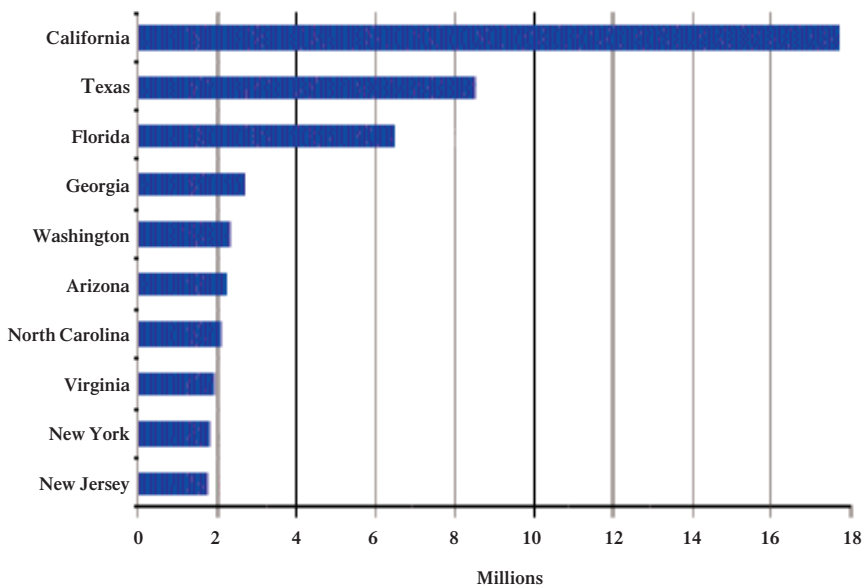
- **How will a global market and increased competition impact U.S. policy and practice?** Just as the United States will increase its *export* of higher education, the *import* market will probably increase as well. This phenomenon is simply higher education’s version of free trade. The United States is not the world’s only purveyor of postsecondary education. The United Kingdom has provided substantial international leadership in distance education through the Open University. Other countries, including Australia and Canada, are opening up trailblazing global opportunities that enable students worldwide to obtain university degrees via the Internet.

CHART 2. TEN MOST POPULOUS STATES, 2000



Source: U.S. Census Bureau, Census 2000 Redistricting Data (P.L. 94-171) Summary File and 1990 Census.

CHART 3. PROJECTED INCREASES IN POPULATION, 1995 TO 2025



Source: U.S. Census Bureau, Population Division, PPL-47.

As the world becomes more closely aligned in economic terms, American students may begin to explore opportunities abroad. Despite the increased risk of being defrauded by electronic diploma mills, our students will consider attending virtual universities elsewhere in exactly the same way that potential foreign students will look at U.S.-based in-

stitutions. Affordability and quality will eventually drive the E-market in post-secondary education and will continue the process of reducing political and geographic boundaries.

Market-based processes will thus increasingly put pressure on American higher education in all places and all modes. If we play it right, not only will

increasing globalization expand opportunities for our institutions, but the resulting competition will help stimulate improvements in our *own* institutional quality.

LOOKING INWARD— AN EVOLVING AMERICA

The United States is also changing rapidly in important dimensions. According to the 2000 Census, the U.S. population now stands at approximately 281 million. While this figure represents an increase over the past 50 years, our growth is modest compared to that of many other nations. But changes in the *characteristics* of the U.S. population will have dramatic implications for higher education within our own political boundaries.

The nine most populous states in the United States now represent over half of the nation's total population, and the top four—California, Texas, New York, and Florida—account for one-third (Chart 2). Through the 1990s, six states accounted for almost half the growth that occurred during the decade—all situated in the southern portion of the country. California, Texas, and Florida accounted for one-third of the national population growth during the 1990s. Twelve states realized growth rates in excess of 20 percent in one decade.

However, dramatic changes in growth rates tell only part of the story. California's reasonably modest 13.8 percent increase, for instance, translates into a net gain of over 4 million people—by far the largest absolute growth in population of any state. Even New York, with a growth rate of only 5.5 percent, netted a gain of one million people.

Projections of future population growth underline the impact of demographic changes in states like California, Texas, and Florida (see Chart 3). California alone is expected to grow by almost 18 million people by 2025. Simple changes in absolute size will have significant impacts on state social structures and budgets over the course of the next several decades, including both the demand for higher education and the states' ability to pay for it.

But the real policy dilemmas for American higher education do not result from the size of population growth, but rather from where and how the growth is occurring. Not only are certain areas

But the real policy dilemmas for American higher education do not result from the size of population growth, but rather from where and how the growth is occurring.

of the country growing much faster than others, much of the increase is due to increased numbers of people of color. During the 21st century, the white population that now constitutes over two-thirds of the U.S. population will shrink to less than half the total population. Sometime between 2050 and 2075, all of the groups previously considered “minority” in America will outnumber the former “majority” (see Chart 4).

The 18- to 24-year-old population in the United States is of particular interest because it is, and will probably continue to be, the primary market for postsecondary education. Although large numbers of adults will return to higher education, the primary mission of our colleges and universities will still be to provide young citizens with an array of skills and knowledge appropriate for work and citizenship. By 2050, this 18- to 24-year-old cohort will be predominantly of color. By 2100, Hispanics and Asian Americans combined will account for some 50 percent of it.

Estimates of future undergraduate enrollments come from a recent report by the Educational Testing Service (ETS) (see Carnevale and Fry in Resources). The ETS analysis suggests that the nation’s undergraduate population will expand by over 2.6 million students by 2015, 2 million of which will be students of color.

As minority groups increase their shares of the undergraduate population, the share of white undergraduates will fall by almost 8 percent. Asian-American, African-American, and Hispanic populations, meanwhile, will increase by approximately 3, 1, and 5 percent respectively. Although these shifts are significant, they still will not make the distribution of undergraduate students completely representative of the wider population with regard to race and ethnicity.

In 2015, white students in the undergraduate population will continue to be over-represented by more than 400,000 students, and African-American and

Hispanic populations will be under-represented by over 200,000 and 500,000 students (see Chart 5). Despite massive shifts in the distribution of the overall citizenry, these gaps will be difficult to overcome, even in the long run.

It is not surprising that almost half of the total increase of some 2.6 million students will occur in California, Texas, and Florida. California by itself will make up almost one-third of this total (730,000 students). The same states will also have the highest representation of undergraduates of color—62 percent in California, 50 percent in Texas, and 43 percent in Florida.

Immigrant and historically under-represented populations have always had, on average, fewer opportunities to develop their academic skills and to pursue their educational aspirations. Those with the fewest resources also have the fewest support mechanisms to help them climb society’s ladder of opportunity. Personal income is perhaps the greatest factor here.

While the American system of higher education is perhaps the most accessible in the world, it remains far from equal with respect to educational opportunity. Access to quality learning opportunities is very unevenly distributed across the country in our elementary and secondary schools, especially when socioeconomic conditions are taken into consideration (see Adelman 1999 in Resources). The result is a cohort of students with enormous variance in levels of preparation for the rigors of postsecondary study.

Research underscores this indictment. Fewer than 40 percent of 18- to 24-year-olds in the lowest quartile of family income—those with the least academic resources—go to college. This compares to about 80 percent of the top quartile of income earners (Chart 6). Students drawn from the highest-income quartile are thus between two and three times as likely to participate in higher education as their less-advantaged peers.

Advantage breeds further advantage

in today’s world, and higher education is not immune from that reality. While we have admittedly seen historic increases in higher education participation rates by all population groups, gaps in access and completion have remained steady since the mid-1960s. Absent intervention, this phenomenon is unlikely to change for the better any time soon.

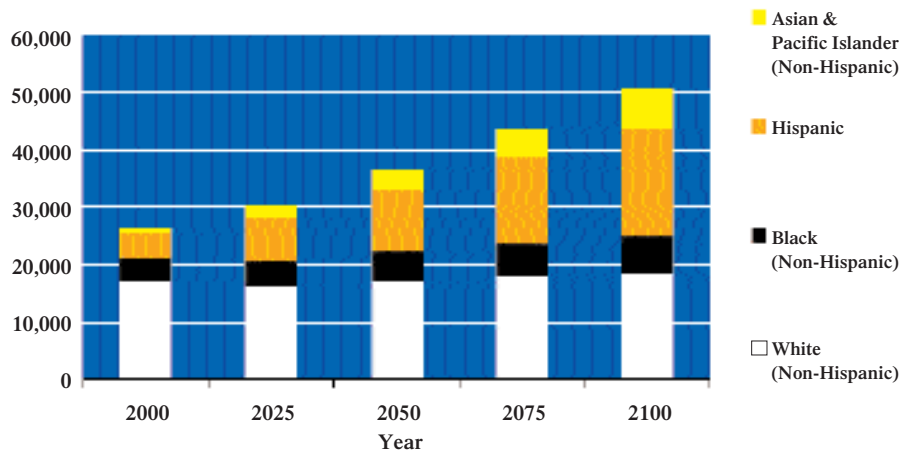
Keeping in mind the direct correlation between income, academic preparation, and postsecondary participation rates, the following summary of the situation by Robert Reich, former secretary of labor, is especially apt:

By the end of the 1990’s...the income gap between the top and bottom 10 percent of earners was wider than at any time since the 1920’s. During the prosperous 90’s, the incomes of people at or near the top grew twice as fast as those in the middle, while the wealthiest 10 percent of families got about 85 percent of the value of all the gains in the booming stock market, and the wealthiest 1 percent got over 40 percent of the gains. Such changes have large consequences: At the end of the 20th century, the richest 1 percent of American families, comprising 2.7 million people, had just about as many dollars to spend, after they had paid all taxes, as the bottom 100 million. And they owned most of America’s marketable assets.

There is little reason to expect that the trends exhibited in the 1990s will lessen in the 2000s and beyond. We have already highlighted these trends for the United States in terms of both age and race/ethnicity. We can probably also predict (although not precisely project) that more of the “New American majority”—both domestically born and immigrant—will fare worse economically than have previous generations.

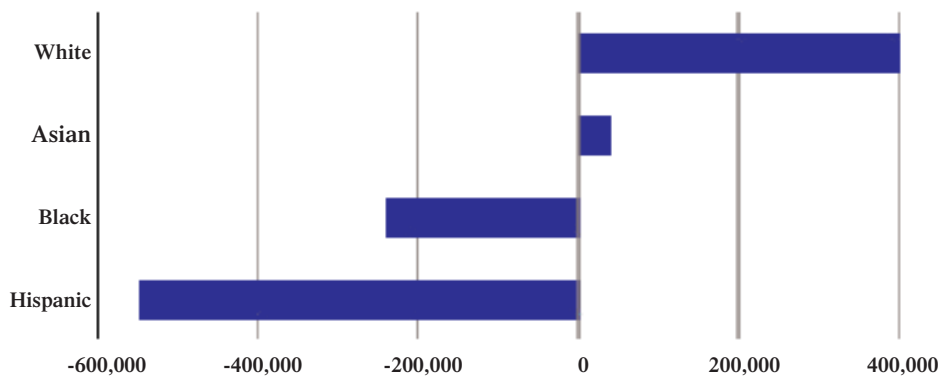
One key to addressing these gaps lies in our ability to improve our K-12 public schools. But this is difficult work. Students attending school in low-income areas are more likely to be taught by

CHART 4. PROJECTION OF U.S. RESIDENT POPULATION, BY RACE/ETHNICITY, 2000 TO 2100



Source: U.S. Census Bureau, Population Division, Population Projections Program.

CHART 5. PROJECTED GAPS BETWEEN 18- TO 24-YEAR-OLDS' POPULATION SHARE AND PRESENCE ON CAMPUS, 2015



Source: Carnevale and Fry, *Crossing the Great Divide* (2000). Based on analysis of U.S. Census Bureau and Population Projections.

teachers who lack adequate teaching credentials or preparation; are less likely to have access to quality technology and other innovative pedagogical resources; and are more likely to attend facilities that are either overcrowded, in disrepair, or simply unsafe because of acts of racism and violence (see Darling-Hammond, Feistritzer, and NCES in Resources).

And although data from the National Assessment of Educational Progress (NAEP) show that students of color have made some educational progress

with respect to learning outcomes over the past 20 years, gaps in achievement between white/Asian-American students and Hispanic/African-American/ Native American students are still substantial.

We cannot precisely project academic preparation into the future with any more certainty than we can project income. The conditions and factors that impact both of these conditions may change at any given time, and are ultimately dependent upon economic and social considerations. But, based on past

experience, it is likely that the new cohort of high school graduates will enter higher education challenged by formidable academic deficiencies.

With these issues and facts before us, we are left with more questions than answers regarding postsecondary policy:

• **How will we better prepare students for postsecondary study and what role will higher education play in doing so?** In its 1999 final report, *Reaching the Top*, the National Task Force on Minority Achievement stated: "To put it quite simply, America is a diverse society in which educational differences have the potential to become a progressively larger source of inequality and social conflict." As a nation, the need to improve academic ability and achievement for elementary and secondary students is our greatest barrier to equal access and opportunity to postsecondary study. And it is surely our toughest challenge.

Historically, U.S. institutions of higher education have not seen it as part of their responsibility to address the issue of student preparation prior to collegiate matriculation. But fallout from Proposition 209 and the *Hopwood* case in Texas is causing a shift in attitudes for both institutions and the public.

Institutions are now beginning to search for ways to partner with local schools and communities to bring about educational change. But this has occurred only in a limited and sporadic way across the country. Only the creation of a true K-16 alliance will result in improved outcomes. Doing this will require far greater levels of commitment on the part of our college and university faculties—and not just faculties in schools of education—than ever before.

The recent "Pathways to College" initiative, a government/private/public alliance that includes the U.S. Department of Education and a number of philanthropic and non-profit associations, is trying to integrate the various sectors by forging partnerships and collaboratives that will change attitudes and practices, improve current levels of academic preparation, and create opportunity for our nation's neediest students. This long-term effort operates on the belief that collaboration and shared responsibility are critical for addressing current deficiencies in academic preparation among under-

Higher education's ability and willingness to reach down and work with other agencies early in the educational pipeline is critical to future success.

served populations.

But Pathways is only one small example of what can be done. Similar collaborative efforts need to be shared and replicated. With approximately 4,000 colleges and universities, 110,000 public schools, and 53 million public school students in the United States, these efforts have only begun to scratch the surface.

Just as our nation has an international responsibility to provide strategic support to developing nations, we have a similar responsibility to better address the needs of our own underserved citizens. Higher education's ability and willingness to reach down and work with other agencies early in the educational pipeline is critical to future success.

• **How will our institutions address the new demographic realities?** Most federal and state educational policies for the past half-century in the United States have focused on access to higher education. We are now coming to the realization that simple access, without a simultaneous commitment to the *completion* of a program of study, does not guarantee future success or deliverance from poverty. Federal policymakers are beginning to think differently about how our current funding programs work. Just as other nations have experimented with linking graduation rates with institutional funding and financial aid and with student completion, there is increasing pressure to implement similar policies in the United States.

A number of states with performance funding systems for public higher education have already made this link, though the financial stakes remain small. Certainly such a change at the federal level would constitute a significant cultural shift. But the age of accountability is upon us and we can expect future reauthorizations of the Higher Education Act to seriously consider these types of policies.

Going down such a path with respect to funding is replete with complexity.

But policies aimed at rewarding institutions and students for completing their programs might force institutions to provide stronger support services to increase student retention and degree completion.

Institutions that serve high numbers of under-represented populations will face the most formidable challenges in this type of environment. While many low-income students and other underserved populations attend private institutions or public flagship campuses, the vast majority attend smaller colleges with fewer resources. Open-admissions institutions also have the fewest resources with which to provide adequate support mechanisms. Care will need to be taken to craft appropriate policies that ensure these institutions are not adversely affected. Policymakers will have to address this need

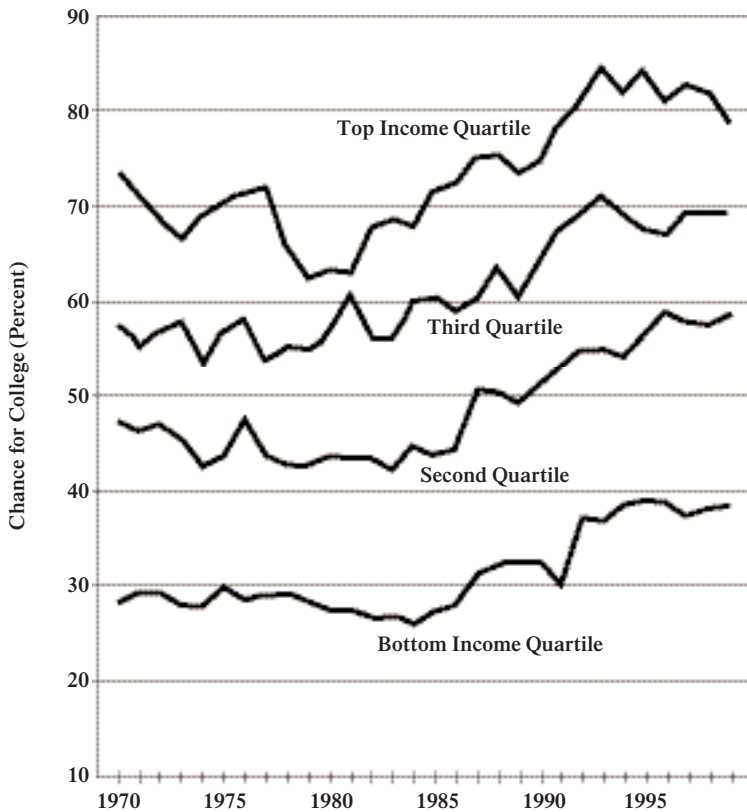
through increased direct support and incentive structures that continue to reward these institutions for pursuing their difficult mission.

• **How do we keep higher education affordable?** The consumer price of higher education remains a significant barrier to access and completion in America. Recent analyses emphasize that the relative burden of tuition and fees on low- and middle-income families across the country continues to escalate. Students from these populations must take on a far heavier financial burden than that assumed by upper-middle-class students, even after financial aid is considered.

As long as tuition and fee charges continue to increase at rates double that of inflation, the ability to keep higher education affordable for these populations is significantly impaired. Compli-



CHART 6. COLLEGE PARTICIPATION FOR DEPENDENT 18- TO 24-YEAR-OLDS BY FAMILY INCOME QUARTILES IN THE UNITED STATES, 1970 TO 1999



Source: Mortenson, Thomas, Higher Education Opportunity: How is the Country Doing? A presentation for The National Center for Public Policy & Higher Education Associates, May 5, 2001—Warrenton, Virginia (www.postsecondary.org).

cating matters, the new demographics suggest that future undergraduate populations will require substantially increased levels of financial assistance to create and sustain the support mechanisms needed to ensure increased levels of persistence and degree completion. As a result, the cost of providing higher education on a per capita basis will likely grow in proportion. What remains unknown is how much of the cost increase will get passed on to the consumer.

Demographic trends in the United States do not bode well for higher education finance. An aging population will put additional stress on our Medicare/Medicaid and Social Security systems, shifting government resources away from higher education. And in recent years, we have become a society that is less inclined to share its wealth through philanthropic giving.

Rising tuition and fee charges, student-aid programs that can't keep up with inflation, and a shift in political/

social philosophy that swings the pendulum of responsibility away from the public sector toward the individual are trends that we can expect to continue. The result, absent intervention, will be an increased burden on low-income students and families, further exacerbating current gaps in access and completion between advantaged and disadvantaged populations.

From a policy perspective, several things have happened that should cause considerable alarm. The first is a significant shift from need-based to merit-based funding in student aid. While there is nothing inherently wrong with merit-based aid, the huge political push for it without a parallel emphasis on need-based aid is discouraging. The Pell Grant—the foundation of the entire federal student-aid system—is continually at risk in today's political world because it is not an entitlement program.

Each year, higher education associations and advocates must fight through a

contentious Congressional appropriations process to gain very small increases in the size and scope of need-based grants. This process is a main reason that the Pell Grant has lost much of its purchasing power since the early 1980s. Due to a lack of political will, we were unable to bring higher education into a more affordable era during the "surplus society" of the late 1990s.

Further erosion of need-based aid in the United States looms as an enormous cloud as our economic prospects worsen. Until state and federal policymakers step up to the plate and fight actively for need-based aid programs, affordability will likely move from bad to worse.

• **What kinds of institutions will be left behind in the competitive race?**

An influx of nontraditional providers is currently changing the face of postsecondary education. According to Clifford Adelman, "over 1.6 million individuals worldwide earned approximately 2.4 million information technology certifications by early 2000," and "three corporations administered over 3 million examinations in 140 countries in 1999." This is the face of the new higher education. A growing number of for-profit agencies and organizations are looking at the traditional and adult populations as a lucrative potential market for postsecondary provision. The advent of Internet-based instruction, for-profit providers, and a growing network of international institutions has created a competitive market that is also having an impact on U.S. higher education.

What can we expect over the course of the next several decades? As higher education becomes a new "widget" in the global economy, some institutions will be forced out. And as surely as U.S. institutions are aggressively setting their sights on foreign markets, foreign institutions will aggressively market to U.S. audiences. Only those institutions (and companies) able to adapt quickly and creatively to this competitive situation will prosper in the new economy.

• **What will be the net impact of virtual instruction and alternative delivery methods?** As mentioned already, online instruction and virtual universities will surely have an impact on higher education. Moreover, many of the growing nations like India and China expect a wireless Internet to provide an opportu-

RESOURCES

- Adelman, Clifford, *Answers in the Tool Box*, Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, 1999.
- ————*A Parallel Postsecondary Universe*, Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, 2000, p. v.
- Campbell, Jay R., Catherine M. Hombro, and John Mazzeo, *Trends in Academic Progress: Three Decades of Student Performance*, NAEP 1999, Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, 2000.
- Carnevale, Anthony, and Richard Fry, *Crossing the Great Divide: Can We Achieve Equity When Generation Y Goes to College?* Princeton, NJ: Educational Testing Service, 2000.
- College Board, *The Trends in College Pricing 2000*, New York: The College Entrance Examination Board, 2000.
- Darling-Hammond, Linda, *Solving the Dilemmas of Teacher Supply, Demand, and Standards: How We Can Ensure a Competent, Caring, and Qualified Teacher for Every Child*, New York: National Commission on Teaching & America's Future, 1999.
- Feistritzer, C. Emily, *The Making of a Teacher: A Report on Teacher Preparation in the U.S.*, Washington, DC: Center for Education Information, 1999.
- Kipp, Samuel M., "Demographic Trends and Their Impact on the Future of the Pell Grant Program," in Gladieux, Astor, and Swail (eds), *Memory, Reason, and Imagination: A Quarter Century of Pell Grants*, New York: The College Board, 1998, p. 109.
- McCarthy, Kevin F., *World Population Shifts: Boom or Doom?* A RAND Report, Santa Monica, CA: RAND, 1999.
- Mortenson, Thomas, *Higher Education Opportunity: How Is the Country Doing?* A presentation for The National Center for Public Policy & Higher Education Associates, May 5, 2001, Warrenton, Virginia, www.postsecondary.org.
- National Center for Education Statistics, *The Condition of Education 2001*, Washington, DC: U.S. Department of Education, 2001.
- Reich, Robert B., "How Selective Colleges Heighten Inequality," *The Chronicle of Higher Education*, October 15, 2000, p. B7.
- World Bank, *A Better World for All, 2000*, a publication of the World Bank, International Monetary Fund, Organization for Economic Cooperation and Development, and the United Nations, 2000.
- U.S. Census Bureau, *Money Income in the United States: 2000*, Current Population Reports, Washington, DC: U.S. Government Printing Office, 2001, pp. 60-213.
- U.S. Department of Commerce, *Falling Through the Net II: Toward Digital Inclusion*, Washington, DC: National Telecommunications & Information Administration, October, 2000. ☞

nity to leapfrog the developed world in access and opportunity. Wired technologies have long been a barrier for developing nations, and the creation of a wireless infrastructure is already having immediate and sizable impacts in this part of the world.

But there is much disagreement about whether these technology-based methods of instruction will actually increase opportunity and access. While many institutions suggest that offering online and extension services will provide access to students who would otherwise not attend college, we know that most students taking courses online do so primarily for reasons of convenience. Many students enrolled in online courses at four-year institutions in the United States, for instance, are actually full-time, residential students.

A similar phenomenon can be observed for nontraditional providers, whose actions may or may not increase access to postsecondary study for underserved populations. The University of Phoenix, for example, markets largely to adult audiences who are already employed professionally and are earning good incomes.

Whether online and other distributed forms of education will really meet the pressing needs of students characterized by the new demographics is yet to be seen. Very little research has been done on learning styles and preferences with regard to online learning. Students who are academically challenged and come from backgrounds without significant higher education experience may not fare well in the independent and isolated atmosphere that is typical of online instruction. The Internet may indeed prove to be a lever for opportunity, but it certainly will not be the cure-all that some would espouse.

CONCLUDING THOUGHTS

Our capacity to conceptualize and understand the impact of impending demographic changes at the national and international levels is critical to our ability to mold responsible higher education policies as a nation. While the events of September 11 produced significant changes in our *Weltanschauung*, a possible blessing in that tragic event is a change in attitude toward the rest of the world. The United States is clearly *not* an island. What happens interna-

tionally as well as locally will decisively affect what we do in higher education and elsewhere.

The global market presents a historic opportunity for growth and service for American higher education. An exciting and productive role awaits us if we are inclined to accept the challenge. Meanwhile, we must not turn our back on the formidable challenges that face us within our own system of higher education.

The future competitiveness of the United States at the international level lies largely in our ability to create and sustain a highly skilled workforce. A society that continues to provide unequal educational opportunity, and that fails to reduce significant barriers to higher education for *all* of its citizens, will be at a distinct disadvantage with respect to international competition.

Only a clear understanding of the complexities of educating the coming generations—together with a creative understanding of the potential of emerging technologies, new strategies in teaching and learning, and the competitive forces that will impact the higher education market—can prepare us for the road that lies ahead. ☐