A global revolution has been taking place in higher education during the past half-century that is at least as dramatic as the one that happened when the German research model fundamentally changed the nature of the university worldwide in the 19th century. And the transformation of the late 20th and early 21st centuries is more extensive than the earlier one, due to the sheer numbers of institutions and people involved.

In our view, four fundamental and interrelated forces have impelled the current academic revolution: the “massification” of higher education, globalization, the advent of the knowledge society and the importance of research universities within it, and information technology (including distance education). These forces have presented nations with enormous funding challenges and fueled the rise of the private sector and the privatization of public colleges and universities, the accountability movement (including today’s imperative to measure the outcomes of higher education), and deep changes in the nature and role of the professoriate.

The United States, like other nations, is affected by these global forces; it has also played a key role in creating the revolution. Although the US is now second to China in enrollments, our nation invented mass higher education.
became the global scientific superpower following World War II, and largely created the information technology revolution. But whether it will retain its status as the world’s academic leader depends on how it copes with the forces of change.

Massification

A central phenomenon of 21st-century higher education is massification—the tremendous expansion of enrollments that has taken place worldwide in the past 30 years. The percentage of the traditional-age cohort enrolled in tertiary education globally has grown from 19 percent in 2000 to 26 percent in 2007. There are now more than 150.6 million tertiary students in the world, roughly a 53 percent increase over 2000, and the Organization for Economic Cooperation and Development (OECD) predicts that the trend will continue for at least the next 20 years.

The United States was the first country to achieve mass higher education, with some 40 percent of the traditional-age cohort attending postsecondary education in 1960. But other countries have subsequently caught up with and even surpassed the US’s attainment rates. The most dramatic gains have been in middle- and upper-income countries. Western Europe and Japan experienced rapid growth in the 1980s, followed by East Asia and Latin America. But China and India, which enroll only 20 percent and 10 percent of their age groups respectively, are still the world’s largest and third-largest academic systems. Those systems will be expanding rapidly in the coming decades and may soon account for close to half the world’s enrollment growth.

Meanwhile, in low-income countries tertiary-level participation has improved only marginally, from 5 percent in 2000 to 7 percent in 2007. Sub-Saharan Africa has the lowest participation rate in the world at 5 percent. In Latin America, enrollment is still less than half that of high-income countries.

At the first stage of growth, higher education struggled just to satisfy demand—to meet the need for an enlarged infrastructure and a larger teaching corps. Then the deeper implications of the expansion began to unfold: in most countries massification diversifies higher education and creates social mobility for a growing segment of the population, but it also forces nations to face, among other challenges, the fact that some subgroups continue to be underserved.

Inequalities in Access

Broader postsecondary participation has not benefited all sectors of society equally. A recent comparative study of 15 countries shows that despite higher education’s greater inclusiveness, the privileged classes have retained their relative advantage in nearly all nations.

Providing higher education to all sectors of a nation’s population means confronting the social inequalities—deeply rooted in history, culture, and economic structures—that influence an individual’s ability to compete. Geography and an unequal distribution of wealth and other resources such as high-quality primary and secondary education all contribute to the disadvantage of certain population groups, whom the OECD expects to become more vocal about their relative lack of access over the coming decades. For instance, participation generally tends to be below national averages for populations living in remote or rural areas and for indigenous groups.

A number of governments have put measures in place to increase access for underprivileged groups. Mexico’s Ministry of Education has invested in the development of additional educational services in disadvantaged areas with some success: 90 percent of students enrolled there are the first members of their family to pursue higher education, and 40 percent live in economically depressed areas. Initiatives in Ghana, Kenya, and Tanzania have lowered admission cutoff scores for women to increase female enrollment. Brazil has mandated universities to reserve space for the disabled and for Afro-Brazilian students. The Indian government obliges universities to reserve spaces for marginalized castes, tribes, and other groups; the result has been modest improvement, but the participation of the lower castes, rural populations, and Muslims continue to lag behind the general population (see the box on the next page).

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**Figure 1. Tertiary gross enrollment ratio, percentages by geographical region, 2000 and 2007**

![Figure 1](https://www.changemag.org/images/figure1.png)

Women in Higher Education: Making Progress But Still Not Equal

In a relatively short time, women have advanced from constituting a small percentage of the enrollments in higher education to exceeding the participation rates of men in many countries, and the OECD predicts that this trend will continue. Indeed, according to United Nations Educational, Scientific, and Cultural Organization (UNESCO) data, female enrollment in higher education worldwide stands at 51 percent, and women significantly outnumber men in higher education in several countries. Still, despite women’s move toward parity, careful examination of the data reveal that gender equity has not yet been achieved.

UNESCO data show increasing female enrollments in countries as diverse as Bahrain, Brunei, Barbados, Norway, Sweden, and Latvia. Female enrollment hovers around 50 percent in most Arab states and 58 percent in Saudi Arabia; it surpasses 60 percent in Jordan and Oman. But although women have made impressive progress in many developing countries, their participation rates still trail men’s in most African countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>1988</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>64</td>
<td>105</td>
</tr>
<tr>
<td>United States</td>
<td>116</td>
<td>140</td>
</tr>
<tr>
<td>Netherlands</td>
<td>81</td>
<td>108</td>
</tr>
<tr>
<td>Chile</td>
<td>82</td>
<td>96</td>
</tr>
<tr>
<td>Malaysia</td>
<td>87</td>
<td>131</td>
</tr>
<tr>
<td>India</td>
<td>47</td>
<td>70</td>
</tr>
<tr>
<td>China</td>
<td>55</td>
<td>95</td>
</tr>
<tr>
<td>Brazil</td>
<td>106</td>
<td>132</td>
</tr>
<tr>
<td>Pakistan</td>
<td>46</td>
<td>88</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>25</td>
<td>53</td>
</tr>
<tr>
<td>Mexico</td>
<td>66</td>
<td>99</td>
</tr>
</tbody>
</table>


Women in Africa, as in many developing countries, generally suffer from less and poorer-quality basic education because of cultural biases and domestic responsibilities that cause interruptions in attendance. Thus they are apt to be less competitive for university admission. Some African countries have experimented with affirmative-action programs to increase female enrollment, with mixed success. In Ghana, Kenya, Uganda, and Tanzania, governments have lowered admissions cutoff scores for women. While this may result in more women enrolling, the program tends to reinforce prejudices about the inferior abilities of women (Bloom, Canning, and Chan 2005).

Women are not distributed equally among all fields of study; they continue to enroll more in traditional fields of study with less income potential, such as education, and less in the science, technology, engineering, and mathematics (STEM) fields. UNESCO international data show female enrollment in engineering, manufacturing, and construction at 21 percent in 2000, with a minor increase to 23 percent by 2007. In contrast, women represented 65 percent of the enrollment in education in 2000, which grew to 68 percent in 2007.

Even within the OECD countries, the ratio of women to men remains higher in vocational and intermediate-degree than in baccalaureate-level programs (Vincent-Lancrin 2008). UNESCO data also indicate that women’s current levels of participation in graduate study do not yet correspond to their growing presence in university programs.

Women’s colleges have played a significant role in educating women. They are found today in the United States, Canada, the United Kingdom, Bangladesh, Pakistan, Japan, South Korea, the Philippines, India, the United Arab Emirates, Iraq, and Sudan, among other countries. Interestingly, as the number of women’s colleges declines in the United States, new colleges for women are being established in Asia, Africa, and the Middle East. As might be expected, in some Islamic states women are educated separately. “Women-only” institutions often take the form of teacher-training schools.

The raison d’être for these institutions varies from offering accomplished role models to providing safe havens for study. Much more research is needed to determine how (and whether) this type of institution affects the education and subsequent success of the women who enroll there (Purcell, Matross Helms, and Rumbley 2005).

The rewards of education are not equal. Salaries for university graduates are lower for women than for men in most OECD countries. In Education at a Glance (2009), the OECD reports that a male student who completes a university degree will enjoy US$186,000 (averaged across OECD countries) in additional lifetime earnings compared to his high school-educated peer, whereas a woman university graduate earns only US$134,000 more than her contemporary with a high school diploma. The situation is similar in the US, were a male graduate earns an additional $360,000 during a lifetime compared to his contemporary with a high school diploma, while a female earns only a $229,000 premium over her high school-educated counterpart (Ghilarducci 2009). Only in Turkey and Hungary are earnings for men and women with university degrees nearly equal (OECD 2009).

This lower economic return on investment in higher education for women undoubtedly reflects the concentration of women in traditionally “female” fields, enduring salary discrimination in the workplace in many countries, and the glass ceiling that often cuts off a woman’s professional trajectory.

As with other issues of access to higher education, true parity for women in higher education will require that societies address the more complex issues that shape the opportunities available and the choices women make.
Even in countries where enrollment is high, inequalities persist: in the United States, participation rates for minority students continue to lag. Community colleges have made tertiary education more accessible, but research shows that the likelihood that community college students will continue on to a four-year degree is largely determined by the socioeconomic status of the student’s family, regardless of race or ethnicity.

Cost remains an enormous barrier to access. Even where tuition is free, students have to bear indirect costs such as living expenses and often a loss of income. Scholarships, grants, and/or loan programs are showing some success but cannot by themselves remove economic barriers. Everywhere, fear of debt tends to be a greater deterrent for students from poorer backgrounds than for those with wealth enough to buffer the shock.

Some nations have developed promising approaches to this problem. Income-contingent loan schemes (where repayment plans are tied to post-graduation earnings) have gained popularity in Australia, New Zealand, and South Africa, although they are still more attractive to middle- and lower-middle-class students. Mexico has introduced loan programs that make the private sector more accessible to a broader spectrum of families. And Chile has implemented a new loan program that targets students from low-income families.

Results have been positive in all of these places, but problems persist almost everywhere. The fact is that financing access for previously underserved populations complicated by the recent financial crisis is a serious challenge globally. It is entirely possible that some of the progress that has been made in recent years will be reversed, or at least slowed down, by financial problems.

**Teaching, Learning, and Curricula: Persistence and Pertinence**

Access is more than “getting through the door.” True progress depends on levels of completion for all population groups. An increasingly diverse student body creates pressure to put in place new systems for academic support and innovative approaches to pedagogy.

Research shows how teaching influences student academic engagement. So Mexico, for example, has created new “intercultural universities” grounded in indigenous philosophies, cultures, languages, and histories. Student diversity has also contributed to a worldwide increase in the popularity of many professionally oriented programs and institutions, notably in the business and information and communications technology fields. In much of the world, however, the goal of ensuring that today’s diverse student population completes the academic programs and is prepared in terms of skills for a changing economy and labor force remains only partly fulfilled.

Modernizing the curriculum for the new global economy and ensuring local relevance at the same time is an additional challenge. There is a growing interest in the liberal arts and interdisciplinary studies as a means of introducing curricular flexibility and educating students for independent thinking and leadership.

**Globalization and Internationalization**

Universities have always been affected by international trends in the broader international community of academic institutions, scholars, and research. But 21st-century realities have magnified the importance of the global context. Globalization, a key reality in the 21st century, has been shaped by such factors as an increasingly integrated world economy, new information and communications technologies, the emergence of an international knowledge network, and the rise of English as the universal language of scientific communication (unprecedented since Latin dominated the academy in medieval Europe).

Many of these forces are beyond the control of academic institutions, but they have already profoundly affected higher education. Consequently, universities and governments have implemented a variety of policies and programs to respond to them. These include sending students to study abroad, setting up branch campuses overseas, internationalizing curricula, and engaging in international partnerships.

Internationalization has also promoted policy development at the regional level. The Bologna process and Lisbon strategy in Europe are the clearest examples, with the first drawing more than 40 countries into a voluntary process to create a European higher education area. Bologna has become a model for similar efforts elsewhere in the world, such as the Enlaces initiative in Latin America and the harmonization strategy in the African Union.

**Student Mobility**

Globalization has also led to a dramatic increase in student mobility. By some estimates, the number of students studying outside of their own countries will rise to more than seven million by 2020. The flow of students, while reflecting national and institutional strategies, has mainly been the result of decisions made by individual students worldwide.

The overwhelming direction of mobility is from the developing world to North America, Western Europe (especially to the English-speaking nations), and Australia. Asia is the major sending region. However, mobility within the European Union and increasingly among Asian countries is growing in importance (see the box on the next page).

**Inequalities Among Nations**

For the “haves” in the developed world, the globalization of higher education offers exciting new opportunities for study and research, which are no longer limited by national boundaries. For many developing countries, though, the trend represents an assault on national culture and identity. It is undoubtedly both. But without a doubt, it has increased the inequalities among nations’ higher education systems.

During the last decade, for instance, there has been a veritable explosion in the numbers of programs and institutions that are operating in some countries. Qatar, Singapore, and the United Arab Emirates stand out as examples of countries that have boldly promoted internationalization as a matter
Internationalization: Language, Curricula, and People on the Move

The movement of people across borders is one of the oldest and most obvious manifestations of internationalization. UNESCO estimates that in 2007, there were more than 2.8 million internationally mobile students, an increase of some 53 percent over the estimated figure of 1.8 million in 2000. Attracting these students is clearly a “growth industry,” with more than 7.2 million students expected to be studying outside their home countries by 2025 (Böhm et al. 2002).

The global numbers tell one part of the story; equally important are regional considerations. The 2007 UNESCO data indicate that the vast majority of mobile students—some 64 percent—opt to study in North America and Western Europe. This figure is down from 70 percent in 2000 but is still characterized by a strong “South-North” flow. Internationally mobile academic talent tends to gravitate toward the more developed countries. The United States still absorbs the largest percentage of these students—20 percent in 2008—followed by the United Kingdom, with 13 percent of the world’s share of international students (Institute of International Education 2008a).

There is some evidence that “South-South” mobility is on the rise, with non-European and non-North American countries such as China, Egypt, Singapore, and South Africa beginning to emerge as popular destinations for students from within their respective regions and beyond (de Wit et al. 2008). However, the flow of students from the North to the South remains extremely small. For example, whereas in 2006/07, 35,802 African students came to the United States, only 10,066 US students studied in the whole of Africa—just 4.2 percent of the total US study-abroad population that year. By contrast, 138,871 American students were in Europe in 2006/07, representing 54.7 percent of all American students abroad (Institute of International Education 2008b).

Although student mobility has long been one of the key manifestations of internationalization, many countries around the world have incomplete or unreliable data relating to the international students coming into their higher education systems or domestic students going abroad. “Project Atlas” (http://www.atlas.iienetwork.org/page/home/), launched in 2005 by the US-based Institute of International Education, coordinates definitions and data-collection strategies across more than two dozen countries, in an effort to make better and more accurate sense of the global flow of students.

Language and Curriculum Creep

In recent years internationalization has also exerted very real effects on what is taught and how. A central consideration here is the increasing use around the world of English as the primary language of instruction, scholarly communication, and academic publishing. Countries ranging from the Netherlands—where the number of programs delivered in English has grown to 1,300, making it the “biggest provider of English-language higher education in continental Europe” (NUFFIC 2007)—to Ethiopia are using English as a medium of instruction.

This trend has been accelerated over the last decade by (among other things) increased student mobility and cooperative programming in Europe, the uptick in branch-campus establishment in the Middle East, efforts in parts of Asia to attract larger numbers of international students to countries with more “difficult” languages, and the desire to increase the capacity of developing countries (in Africa and elsewhere) to participate in the global market for talent to drive the knowledge economy.

Also notable is the international convergence around certain Western-style credentials and pedagogy. The best example here may be the master of business administration (MBA) degree. The UK-based Association of MBAs actively accredits 161 schools in 72 countries. Recent attention paid to the role of humanities and the liberal arts in such varied locations as Abu Dhabi, Ghana, Hong Kong, and Russia also illustrates the effects of globalization and internationalization on curricula.
Information and communications technologies...have helped to concentrate publishing capacity, databases, and other key resources in universities and in some multinational companies located almost exclusively in the developed world.

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The academic world has always been characterized by centers and peripheries. The strongest universities, located almost exclusively in the richer countries, are seen as centers because of their research prowess and reputations for excellence. Information and communications technologies, by enabling instantaneous contact and simplified scientific communication for those with access to sophisticated systems, have helped to concentrate publishing capacity, databases, and other key resources in universities and in some multinational companies located almost exclusively in the developed world. Meanwhile, universities in poorer countries—in much of Africa, for instance—have found it extremely challenging to find their footing on the global higher education stage.

There is a growing tension around the center-periphery dynamic. Developing countries often want world-class universities on a par with the traditional universities at “the center.” [Ed. note: See the article by Gail Mellow and Peter Katopes in the September/October 2009 issue of Change for an argument that these countries would be better served by a robust community-college system.] Today’s mania for ranking academic institutions and degree programs adds to this tension. Poorer countries’ universities barely register on the world rankings and league tables and produce only a tiny percentage of the world’s research output—in part because research capacity is limited but also because the research done may be relevant for local needs but is not counted for the rankings. Institutional rankings favor universities that use English as the main language of instruction and research, have a large array of disciplines and programs, and garner substantial research funds from their governments or other sources.

Intellectual property is a growing challenge across higher education but especially in research universities. Who owns knowledge? Who benefits from research? The topic often brings into focus the potential conflicts between those who produce research and their sponsors, who may wish to control the knowledge and benefits that come from it. Universities, seeking to maximize revenues, want to protect their rights to intellectual property—research results that promise patents, licenses, and income—as do corporate sponsors. The individual researcher’s rights with regard to the products of his or her research are thus eroding.

In the developing world, scientific and technological research after World War II was largely a state-supported enterprise concentrated in government research institutes. This has changed quite radically, beginning in Eastern Europe with the downfall of the Soviet Union. The most revealing change, however, has taken place in China since the 1990s, where the trend to fund university-based research is now more in line with the West, and graduate programs of all kinds have been dramatically expanded.

A number of other middle-income and developing countries also have ambitious agendas to raise the amount and quality of their research activities. In South Korea, the Brain Korea 21 plan of 1998 promoted the concentration of research efforts within the top universities. In Latin America too, university-based research continues to be concentrated in a few large-scale public universities. The Brazilian system awards some 10,000 PhDs and 30,000 master’s degrees each year, a 300 percent growth in 10 years. The production of research scientists has been stepped up across the globe. In the near future, some middle-income and developing countries will have the capacity to compete with the traditional academic superpowers in research and development.

Information and Communications Technology

It is obvious that academe is being influenced or—some people would argue—transformed by developments in information and communications technology. Some have even claimed that the traditional university will be rendered obsolete by distance education and other technology-induced innovations. We do not share this view—universities will continue to be powerful communities of teachers and students and the home of research. But undoubtedly the new technologies will play a key role in the transformation of higher education in the 21st century.

The Internet has truly revolutionized how knowledge is communicated. E-mail has become a ubiquitous means for academic interaction of all kinds. Electronic journals have become widespread and in some fields are beginning to displace print publications. Even traditional publishers of books and journals have increasingly turned to the Internet to distribute their materials.

But despite its heady promise, this trend has exacerbated the division between the academic haves and have-nots. Some parts of the world, particularly Africa, remain relatively underserved by high-speed Internet access, while other emerging nations, such as South Korea and Singapore, are at the forefront of...
countries providing such access. That does not mean that higher education in those countries takes significant advantage of that access, however.

**Financing Higher Education and the Public Good/Private Good Debate**

Not just in the US but across the world, higher education is increasingly viewed as a major engine of economic development. At the same time, tax revenues are not keeping pace with the rapidly rising costs of higher education. Funding shortages due to massification have meant that higher education systems and institutions are increasingly responsible for generating larger percentages of their own revenue by strategies such as the development of university-industry linkages, research, the sale of university-related products, and other entrepreneurial activities.

But potentially the largest source of non-state revenues is tuition. So the expansion of student numbers has presented a particular problem for systems where the tradition has been to provide access to free or highly subsidized tertiary education—in the Scandinavian countries, for instance. In financial terms, this has become an unsustainably fiscally model, placing pressure on systems to fundamentally restructure the social contract between higher education and society at large.

Despite their sometimes dramatic and temporarily effective pushback in countries such as China, India, and much of the rest of Asia, parents and/or students are increasingly responsible for tuition and other fees. Even in Western Europe, long the bastion of free public higher education, tuition fees are now part of funding post-secondary education in all but a few Northern European countries. Tuition fees have been introduced in the United Kingdom (1998) and in Austria (2001), for example, not to mention in China (1997). Many countries, most notably in sub-Saharan Africa and in Central and Eastern Europe, have also significantly increased charges for student living and state subsidies are reduced almost everywhere.

This growing reliance on students to subsidize their own education also reflects a worldwide shift in attitude toward the social function of higher education. Traditionally, postsecondary education has been seen as a *public good*, contributing to society by educating citizens, improving human capital, encouraging civic involvement, and boosting economic development. And indeed, colleges and universities continue to perform social and cultural functions in many countries, a role that is particularly important in those with weak social and cultural outlets and few institutions fostering free debate and dialogue. Universities sponsor publishing houses, journals, theater groups, and noncommercial radio and television stations—in these and other ways serving as key intellectual centers.

Those activities notwithstanding, during the past several decades higher education has increasingly been seen as a *private good* that largely benefits individuals, with the implication that students should pay a significant part of the price of attendance. This debate has intensified due not only to the financial challenges of massification but also to a more widespread political inclination toward greater privatization of services once provided by the state.

In response to these financial pressures, universities and national systems have sought solutions not only on the revenue-generating but on the cost-containment side. Strategies such as increasing class sizes and teaching loads and substituting lower-cost part-time faculty for full-time academic staff are difficult, academically problematic, and heavily contested.

In short, massification, the economic crisis, and a widespread acceptance of the private-good argument have led to a worldwide deterioration in conditions as exemplified by deteriorating student/teacher ratios, problems for the academic profession, and the general impoverishment of academe. The austerity has been most crippling in sub-Saharan Africa, but it is serious throughout the developing world and countries in transition and has affected rich countries as well.

**The Private Revolution**

Some countries—notably Japan, South Korea, the Philippines, Indonesia, Brazil, and others—have coped with the funding dilemma by keeping the public sector relatively selective and elite, shifting the burden of mass enrollments to private higher education. Indeed, the growth of private higher education worldwide has been one of the most remarkable developments of the past several decades.

Private higher education has existed in some countries—including, of course, the US—for centuries, but it was a minor piece of the global higher education puzzle. Now, private higher education institutions, many of them for-profit or quasi for-profit, represent the fastest-growing sector worldwide. In general, the private sector is “demand absorbing”—offering access to students who might not be qualified for public institutions or cannot be accommodated in other universities because of overcrowding. While some selective private universities exist, in most of the world the private sector serves a mass clientele and is not seen as prestigious.

Today, some 30 percent of global higher education enrollment is private. Countries with over 70 percent private enrollment include Indonesia, Japan, the Philippines, South Korea, and Taiwan. The private sector now educates more than half the student population in such countries as Mexico, Brazil, and...
Chile. Private universities are also expanding rapidly in Central and Eastern Europe and in the countries of the former Soviet Union, as well as in Africa. China and India have significant private sectors as well.

For-profit institutions constitute a small subsector of the private landscape, but their market share is growing, especially in developing regions. The sector is run mostly on a business model, with power and authority concentrated in boards and chief executives and with faculty holding little authority or influence. Students are seen as consumers.

A related trend is the privatization of public universities, a new development in much of the world. As we have mentioned, countries such as Australia and China have asked universities to cover more of their operating expenses by generating their own revenues. This has led to a blurring of the boundaries between public and private higher education and in some cases contributes to the commercialization of institutions, which conflicts with their social, cultural, and academic roles.

Quality Assurance, Accountability, and Qualifications Frameworks

Quality assurance in higher education has risen to the top of the policy agenda in many nations and has a growing international salience. Globalization, regional integration, and the ever-increasing mobility of students and scholars have all increased the need for transparent quality-assurance arrangements that can be understood across borders. The explosive growth of both traditional institutions and new providers—such as distance-learning programs and private colleges and universities—also raises new questions about standards of quality.

Although quality is a multidimensional concept, a new pattern for evaluating higher education has been established in most of the world. In a break from the past, this pattern tends to rely on peers rather than government authorities for quality control. Institutions are more often evaluated against their own self-defined missions than against an institutional model defined by a regulatory agency. In many cases, the regulatory function of many government and parastatal agencies has shifted to a validating role.

Postsecondary education has to prepare graduates with new skills, a broad knowledge base, and a range of competencies to enter a more complex and interdependent world. Quite naturally, “consumers” of higher education (students, parents, employers) are demanding some kind of certification of institutions and the qualifications they award. Accreditation and quality-assurance mechanisms have taken on an international dimension, as regions are grappling with the challenges of adding cross-border higher education to the quality-assurance agenda.

An increasing emphasis is being put on outcomes. Agencies throughout the world are struggling to define outcomes in terms that can be understood, measured, and shared across borders and cultures. Evaluators are looking for new data and indicators that demonstrate that students have mastered specific objectives as a result of their education. These new initiatives, many still in their early phases, are also linked to an increasing emphasis on accountability. They will require considerable development, because defining and measuring educational outcomes is difficult, and neither the metrics nor the methodologies have been fully formed.

Currently, the Organization for Economic Cooperation and Development (OECD) is sponsoring a feasibility study for an international Assessment of Higher Education Learning Outcomes (AHELO) aimed at measuring learning. The results of this complex effort will not be apparent for some time. A related effort, the Tuning project, is intended to “harmonize” higher education programs and degrees. Learning outcomes will be defined by subject area and linked to national and international qualifications frameworks established as part of the Bologna Process. A Lumina-Foundation-funded “Tuning USA” is beginning with six fields in Indiana, Minnesota, and Utah as well.

The Academic Profession

Worldwide, the academic profession is under stress as never before. The demands of massification have caused the average qualification for academics in many countries to decline. Possibly up to half of the world’s postsecondary teachers have only earned a bachelor’s degree; in China only 9 percent of the academic profession have doctorates, 35 percent in India. These statistics are in sharp contrast to Western Europe and North America, where the large majority of those teaching in postsecondary education have earned a doctorate.
Globalization, regional integration, and the ever-increasing mobility of students and scholars have all increased the need for transparent quality assurance arrangements that can be understood across borders.

Part-time employment is a growing trend everywhere, as it is in the United States. This is especially the case in developing countries. In Latin America, up to 80 percent of academics are part time, with no employment security or involvement with the university. In many countries (e.g., China, Vietnam, and Uganda), universities employ part-time teachers who have full-time jobs at other institutions and are thus unable to give full commitment anywhere.

The variation in academic salaries among countries is substantial, contributing to a brain migration to countries that pay more. A recent study of academic salaries in 15 countries shows that full-time academic staff can generally survive on their salaries, but they do not earn much more than the GDP per capita average in their country (Rumbley, Pacheco, and Altbach 2008). In other countries, faculty are unable to live on what they make in their university jobs. This contributes to “moonlighting” problems and lessens faculty control over key academic functions such as the assessment of student learning.

Across the world, the professoriate has lost much of its autonomy. The pendulum of authority has swung from the academics to professional managers and bureaucrats, with significant impact on the nature of the university.

**Conclusion**

We live today in the midst of a serious global economic crisis that will have repercussions in society at large and within higher education in ways that are not yet clear. Many countries and universities will experience financial problems, with profound consequences to higher education in the short and perhaps the medium term, although the impact will vary worldwide. Current estimates indicate that some of the least-developed countries will be most affected, in part because their universities have few resources and shakier infrastructures to fall back on. The severity of the economic downturn is perhaps the major factor, but national and local policies will play a significant role as well.

The crisis is likely to have the following consequences worldwide:

* In many cases, the priority will be to allocate funds to ensure that access to the higher education system is not dramatically cut. But at the same time, universities will face pressures to establish or increase tuition fees for students, and higher education is likely to become increasingly unaffordable to marginalized populations. In countries where student loan programs exist, either in the public or private sectors, they may be severely limited.

  * Research universities are likely to see significant constraints on their budgets, since governments will be unable to provide the resources needed for their continued improvement.
• Cost-cutting practices at many universities will result in a deterioration of quality. More part-time faculty are likely to be hired, class sizes increased, and other savings implemented that potentially threaten the overall health and effectiveness of higher education.

• We are likely to see freezes on hiring, the construction of new facilities, improved information technology, and the purchase of books and journals.

We are convinced of the centrality of the higher education enterprise globally and the need for strong, vibrant postsecondary institutions to support the contemporary knowledge economy and civic society, as well as to provide the education necessary for the social mobility and economic progress of individuals that is essential to societies across the globe.

The role of higher education as a public good continues to be fundamentally important and must be supported. We emphasize this because this aspect of higher education is easily neglected in the rush for income and prestige. Understanding the broader role of higher education in a globalized world is the first step to dealing constructively with the challenges that loom, chief among which is the uneven distribution of human capital and funds that will allow some individuals and nations to take full advantage of new opportunities while others risk drifting further behind.

Resources


