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THE GLOBALIZATION OF

College and University Rankings

By Philip G. Altbach

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In the era of globalization, accountability, and benchmarking, university rankings have achieved a kind of iconic status. The major ones—the Academic Ranking of World Universities (ARWU, or the “Shanghai rankings”), the QS (Quacquarelli Symonds Limited) World University Rankings, and the Times Higher Education World University Rankings (THE)—are newsworthy across the world. In this nation, the US News & World Report’s influential and widely criticized ranking of America’s colleges and universities, now in its 17th year, creates media buzz every year—who is “up” and who is “down”? Indeed, most of the national rankings are sponsored by magazines or other media outlets: US News in the United States, Maclean’s in Canada, Der Spiegel in Germany, the Asahi Shimbun in Japan, the Good University Guide in the United Kingdom, Perspektywy in Poland, and numerous others worldwide.

Other ranking systems attract less media attention but are still important within academia: The much-delayed National Research Council’s Assessment of Research Doctorate Programs, released in 2010, is the nation’s only comprehensive analysis of graduate programs. And still others are under development: The European Union is sponsoring a rankings project, and in Germany, the Center for Higher Education has formulated an innovative approach to ranking German universities.

These are only the major initiatives—the list can be extended. Other systems in the US focus on a range of variables—from the “best buys” to the “best party schools” to institutions that are “most wired.” They vary in quality, focus, and in the specifics of their methodologies, but even those with little apparent validity are taken seriously by the public and to some degree by the academy itself.

Some descriptive or classification schemes that were not originally designed for that purpose have also been used to establish hierarchies of institutions. In 1970, the Carnegie Foundation for the Advancement of Teaching, under the leadership of Clark Kerr, created its Carnegie Classification of Institutions of Higher Education. Its purpose was to serve as “a framework for recognizing and describing institutional diversity in U.S. higher education,” not to rank institutions. But over time, many universities have struggled to be included in the “top” category of research universities, some arguably distorting their basic missions in the process.

The same thing happened with the Research Assessment Exercise (RAE) in the United Kingdom. The RAE, which began in 1986 and has been repeated every few years since then, is a government assessment of research productivity by departments and universities. It has also been used to distribute funding, thus motivating British universities to do well by its criteria.

The US National Academy of Sciences and the Center for Higher Education of the Bertelsmann Foundation in Germany each developed a methodology for collecting data on various scientific disciplines and fields in the United States and Germany, respectively. Neither focuses on the university as institution—rather, they concentrate on programs, departments, and disciplines. Again, neither was intended to be used, as it has been, for ranking purposes. The German methodology permits users to select specific variables and develop their own groupings, just as the Carnegie Classification now allows users to “create a customized list of institutions.”

If rankings did not exist, someone would have to invent them. They are an inevitable result of higher education’s worldwide massification, which produced a diversified and complex academic environment, as well as competition and commercialization within it. It is not surprising that rankings became prominent first in the United States, the country that developed mass higher education the earliest.

So who uses these rankings and for what purposes? What problems do the systems have, and what is the nature of the debate that currently swirls around each of them?

**Who Uses Rankings, and For What?**

Within countries, potential customers (students and their families) use rankings to make choices about where to study by determining what various colleges and universities have to offer in terms of the prestige, value, and price of their degrees. Also, almost three million students currently study outside their own countries; many also seek the “best” universities available abroad, which compete not just for students but for staff.

Colleges and universities in the US have long used rankings to benchmark their performance against that of other institutions; they then analyze the reasons for their success or poor performance. Now, universities abroad have followed their lead in comparing themselves to their peers worldwide. Higher education systems and government agencies also employ such comparisons to benchmark their system’s performance against that of other states or nations. Within both institutions and systems, decision makers may allocate resources based on the rankings.

Rankings have become an important tool in the global knowledge race. Like individual institutions in the US, more than a few countries—including South Korea, Saudi Arabia, and others—have set as a priority an improvement in their

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universities’ position in various rankings and are allocating funds to and applying pressure on universities accordingly. Taiwan and Russia have developed global ranking systems, primarily in an effort to benchmark their universities. An agency in Spain has focused on the Web visibility of academic institutions worldwide.

**PROBLEMS WITH RANKINGS**

The rankings have a number of problems that should be kept in mind, though, by individuals and policy makers who rely on them in making decisions.

**They Presume a Zero-Sum Game**

There can only be 100 among the top-100 universities, by definition. Yet the movement of the National University of Singapore to a higher position in the rankings does not mean, for example, that the University of Wisconsin–Madison is in decline. In fact, there is room at the top for as many world-class universities as meet the criteria for such institutions.

Indeed, as countries accept the need to build and sustain research universities and to invest in higher education, inevitably the number of distinguished research universities will grow. The investments made in higher education by China, South Korea, Taiwan, Hong Kong, and Singapore in the past several decades have resulted in the dramatic improvement of those countries’ top universities. Japan showed similar progress a decade or two earlier.

The rise of Asian universities is only partly reflected in the rankings, since it is not easy to knock the traditional leaders off their perches. Hence the rankings undervalue the advances in Asia and perhaps other regions. But as fewer American and British universities appear in the top 100 in the future, this means that worldwide improvement is taking place—surely a cause for celebration, not hand-wringing.

Perhaps a better idea than rankings is an international categorization similar to the Carnegie Classification of Institutions of Higher Education in the United States. Between 1970 and 2005, the Carnegie Foundation provided a carefully defined set of categories of colleges and universities and then placed institutions in them according to clear criteria. The schools were not ranked but rather categorized according to their missions.

This might help avoid the zero-sum problem and better reflect reality. Many argue that the specific position of a university on a list is not really meaningful. What may be reasonably descriptive is the range of institutions in which a university finds itself.

**Teaching is Absent**

One of the main functions of any university—teaching—is largely ignored in all of the rankings, since we have yet to develop comparable measures of its quality and impact even within countries, much less across them. The new *Times Higher Education* rankings at least recognize the importance of teaching and have assigned several proxies to measure its quality: the answers to reputational questions about teaching, teacher-student ratios, the number of PhDs on the faculty, and several others.

The problem is that these proxies do not actually measure teaching quality or come close to assessing its impact on learning. It seems unlikely that asking a cross-section of academics and administrators about teaching quality at other institutions will yield much useful information.

Yet there are some promising efforts to measure learning outcomes in higher education, most prominently the Organization for Economic Cooperation and Development’s AHELO (Assessment of Higher Education Learning Outcomes), which is currently being tested in engineering and economics in about 13 countries (the number is a moving target). [Editor’s note: See Madeleine Green’s article in the September/October issue of *Change* for a discussion of this and other international quality measures.] The United States–based Collegiate Learning Assessment, on which the AHELO is modeled, has also garnered some interest in a few other countries.

However, none of these measures is widely disseminated enough to be relevant for the global rankings in the near future. And they do not measure teaching quality or commitment—a topic that attracts little international attention these days and precious little at the national level.

**Research Dominates the Rankings**

Rankings largely measure research productivity in various ways. This is the easiest product of universities to measure—indeed, the various markers for it (research funding, publications, Nobel prizes, etc.) are the only quality indicators that can be counted in comparable ways across institutions and countries.

The several rankings approach the topic differently. Some, especially the QS, emphasize reputational surveys—what does a somewhat self-selected group of academics and others around the world think of a particular university? The *Times Higher Education* ranking also includes the opinions of academics, but along with its data partner, Thomson Reuters, it has selected several other variables—among them the impact of articles published as measured by citation analysis, funding for research, and income from research.

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Reputation Is of Dubious Validity

Most of the national and global rankings include among the data collected, at least to some extent, the results of reputational surveys. In some, such as the QS internationally and the US News in the United States, reputation looms quite large. Reputational surveys make up half of the QS rankings (40 percent from academics and 10 percent from employers). In others, including the Times Higher Education system, reputation is included but has less prominence. For its latest issue, the THE received the views of 17,554 academics, 64 percent of whom were in North America or Europe.

In reputational surveys, peers and experts are asked to rank departments, institutions, or programs. In some cases, respondents are carefully selected from appropriate peers; in others, they appear to have been chosen without much logic. This, of course, creates methodological problems.

But a larger concern is more basic. What detailed knowledge can any random group of respondents be expected to have concerning the relative excellence of academic institutions globally—or even within a country? Do discipline-based academics have an appropriate knowledge base to rank universities? Would a professor of chemistry from Germany be able to judge which are the best universities in Malaysia or China, even in chemistry? Would a university president in Iowa have expert knowledge about the top universities in South Africa or Thailand? Would Indian vice chancellors know about Norway’s best universities?

Reputational surveys further privilege research. Only the most visible products of a university (star professors, publications, Nobel prizes, Fields medals, and so on) create a reputation, and these tend to be related research. So academics might be able to rank departments within their own fields, if only in terms of research prominence. But they would have no way of judging learning, teaching quality or commitment, or social service on another campus.

Further, it is likely that reputational rankings favor Anglophone universities. The universities that host the most international students and scholars and attract the largest numbers of postdocs are likely to be the most visible to the most people, and these universities are largely in the English-speaking countries. Then, as Malcolm Gladwell commented recently concerning the US rankings, institutions with visibility will tend to garner more visibility.

They Create Centers and Peripheries

Their visibility is not the only reason that the universities and academic systems located in the major English-speaking countries such as the United States, the United Kingdom, Canada, and Australia have a major advantage in the rankings. They and the world’s other knowledge centers in the major western European nations have significant head starts provided by their histories, wealth, ability to attract top scholars and students worldwide, strong traditions of academic freedom, and academic cultures based on competition and meritocracy.

All of the rankings also privilege certain kinds of research: There is a bias toward the hard sciences, which tend to produce the most articles, citations, and research funding, although the various systems are trying to ensure better representation of the “soft” fields. Since the largest number of journals included in the relevant databases are in English, the field is further tilted toward universities that use English and the academics in those universities who produce their work in English.

Language aside, it is easiest for native English speakers to get access to the top journals and publishers and to join the informal networks that establish the pecking order in most scientific disciplines. Universities in Western Europe and Japan also have relatively easy access to the key knowledge networks and to research funding.

The Shanghai-based Academic Ranking of World Universities is probably the most precise in measuring its particular set of variables. Until recently, the ARWU focused almost exclusively on the STEM (science, technology, engineering, and mathematics) fields, underemphasizing the social sciences and largely ignoring the humanities. In 2011, the social sciences and humanities began to receive more emphasis. It is still the case, however, that universities that are strong in the hard sciences rank higher than others that may be just as strong in other fields.

Research, in its various permutations, earns the most attention not only because it has the most clear-cut set of measures but also because has the highest prestige. Universities worldwide want to be research intensive, as the most respected and top-ranking universities are. The supremacy of research in both the rankings and in the global hierarchy has been mutually reinforcing.
Academic institutions in Hong Kong and Singapore have the advantage of financial resources, the fact that English is the main language of teaching and research, and a policy of employing research-active international staff. The emerging economies, most notably China, are increasingly active as well, and they are slowly moving from the periphery to the center. But even well-supported universities in peripheral regions such as the Middle East have disadvantages in becoming academic centers.

That said, in the age of globalization it is easier for academic institutions to leapfrog in the lists with thoughtful planning and adequate resources. For example, POSTECH (the Pohang University of Science and Technology), located in a small city in South Korea, has made a substantial jump, although it is only a quarter-century old. Individual academics as well as institutions and departments can also make a global mark more easily than ever before. But while the barriers between centers and peripheries are more permeable, they nonetheless remain formidable.

The Goalposts Move

Many of the ranking systems have been criticized for frequently changing their criteria or methodology, thus making it difficult to measure performance over time or to make useful comparisons with other institutions. US News & World Report has been particularly prone to changing its criteria in unpredictable ways, making it extremely difficult for the colleges and universities providing data to do so consistently.

The Times Higher Education ranking system, now in its second year, has modestly changed as it tries to improve its methodology. The AR WU (Shanghai) rankings have been the most consistent over time, contributing no doubt to the relative stability of institutions’ and countries’ positions in that system.

A 2011 Critique of the Main Ranking Systems

What are the strengths and weaknesses of each of the major ranking systems? The QS World University Rankings are the most problematical. From the beginning, the QS has relied on reputational indicators for half of its analysis. The weaknesses of that strategy have already been discussed; it probably accounts for the significant variability in the QS rankings over the years. In addition, QS queries employers, introducing even more variability and unreliability into the mix.

Whether the QS rankings should be taken seriously by the higher education community is questionable. Between 2004 and 2009, these ranking were published by the Times Higher Education. That link was dropped, and the Times Higher Education is now publishing its own rankings. Quacquarelli Symonds Limited itself is a for-profit company that is also involved in student recruiting and related activities; it has recently started a program for helping improve the profiles of academic institutions.

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The Academic Ranking of World Universities (ARWU), one of the oldest of the international rankings (start date: 2003), is both consistent and transparent. It measures only research productivity, and its methodology is clearly stated and applied consistently over time. ARWU chooses 1,000 universities worldwide to analyze according to six criteria, including the number of articles published in Science and Nature, the number of highly cited researchers as measured by Thomson Scientific, alumni and staff winning Nobel and Fields prizes, and citations in science and social science citation indices. It does not depend on any information submitted by the institutions themselves for its core evaluations.

Some of ARWU’s criteria clearly privilege older, prestigious Western universities—particularly those that have produced or can attract Nobel and Fields prizewinners. These universities tend to pay high salaries and have excellent laboratories and libraries. The publication indices also rely heavily on the top peer-reviewed journals in English, again giving an advantage to Anglophone universities that house editorial offices and key reviewers. Nonetheless, ARWU’s consistency, clarity of purpose, and transparency are significant advantages.

The Times Higher Education World University Rankings, which appeared for the first time in September 2010, is the newest and in many ways the most ambitious effort to learn lessons from earlier rankings and provide a comprehensive and multifaceted perspective. The THE gets an A for effort. It has included reputation among the variables, combined with citations and numbers of publications. But it has tried to incorporate other main university functions as well—not just research but teaching, degrees produced, links with industry, and internationalization.

Some commentators have raised questions about the THE’s methods of counting publications and citations, however. There are also a number of errors in its report. In the 2010 version, some American universities are listed (and measured) not as single campuses but rather as systems (examples include the University of Massachusetts,
Indiana University, the University of Delaware, Kent State University, and others). This moves these systems up in the rankings unfairly. If, for example, the University of California were included as a single campus, it would clearly rank as number one in the world.

Moreover, apparently due to administrative problems, no Israeli universities are included in the THE rankings. And some of the results are clearly inaccurate. Why do Bilkent University in Turkey and the Hong Kong Baptist University rank ahead of Michigan State University, the University of Stockholm, or Leiden University in Holland? Why is Alexandria University in Egypt ranked at all in the top 200? These and other anomalies simply do not pass the “smell test.”

The long-awaited National Research Council’s evaluation of American doctoral programs was finally issued in 2010. This study, years late, has been widely criticized for methodological flaws as well as for being more an historical artifact than a useful analysis of current reality. Nonetheless, the NRC did attempt to use a more sophisticated approach to its evaluation, including the consideration of 20 key variables relating to doctoral programs. The other rankings tend to use many more arbitrary measures and weightings.

The US News & World Report’s annual rankings juggle- naut continues. Widely criticized in the United States for its constant changes in methodology, overreliance on reputa- tional indicators, and oversimplification of a complex reality, it is nonetheless widely used and highly influential. College and universities that score well, even if they grumble about methodological shortcomings, publicize their positions.

At least US News & World Report differentiates institutions by categories—national universities, liberal arts colleges, regional institutions, and so on. This recognizes variations in mission and purpose. Not all universities are competing with Harvard and Berkeley.

**Where Are We?**

No doubt university rectors and presidents, government officials, and anxious students and parents from Beijing to Boston are even now analyzing one or more of the rankings discussed here or the many others that exist. They will then make decisions in part based on them—decisions about attendance, funding and other support from governments, and which departments and programs to build or perhaps eliminate.

In the world of rankings, as in much else, the prime directive is *caveat emptor*—the user must be fully aware of what each system measures and how well it does so. But the positions of institutions on some scale or other are taken at face value by many users. This of course is a mistake—not only because of the limitations of the rankings themselves but because they only measure one small aspect of higher education.

A government should be just as concerned about how a university fits into the higher education system as it is about its research-based rank. Students should be more concerned about the fit between the institution and their own interests and abilities than about the prestige of an institution.

But railing against the rankings will not make them go away; competition, the need to benchmark, and indeed the inevitable logic of globalization make them a permanent part of the 21st-century academic landscape. The challenge is to understand their nuances, problems, uses—and misuses.