

**Quality Education: Comparing Universities on a Global Scale
in the Information Age**

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I am pleased to have the opportunity to talk with you today about two topics that should be, in my view, closely related, but are rarely discussed together. These are, first, the importance of student learning in the assessment of quality of colleges and universities and, second, the construction of the various systems that are used to produce global rankings of colleges and universities (and what those rankings tell us). My desire to link these discussions is propelled by the accelerated rise of globalism in higher education....the growing expansion of options and choices for study and intellectual collaboration that reach around the world. Study abroad, once reserved for the elite, is widely available to an ever increasing number of students. Students and their families make these choices with information that is as close as the internet. My question, simply put is this: Do the global rankings of universities (so easily available to the net searcher) provide relevant information about the quality of student learning at those universities?

To begin with student learning, I would like to describe what I believe is the most significant change in American Higher Education over the past forty years. I have somewhat arbitrarily selected "forty" because it coincides with my working life in the academy. To personalize: I began my full-time teaching career in 1970 at the University of Massachusetts –Boston during the last year of my doctoral studies at Harvard University. Prior to that I was an undergraduate at the University of Minnesota, and like most of the students of my age, I was taught in the

“lecture and examination” system. No doubt this is an approach to teaching that is familiar to many of you.

Most of my undergraduate courses consisted of lectures. In some, I was in the company of 1000 other students in a large auditorium. The professor was a “speck” in the front of the room who sometimes wrote notes with a grease pen on an overhead projector. These courses might have discussion sections with a graduate assistant once a week, where we were permitted to ask questions, but often were treated to a “mini-lecture” there as well. Smaller lecture courses might have 30-50 students enrolled. The more assertive students were able to ask questions and, sometimes, have a dialog with the professor. As juniors and seniors we were able to take occasional undergraduate seminars of 10-12 students, where we presented work and led discussion. The “examination” part of this system was typically a mid-term and a final examination, taken in “blue books.” In many classes we were also assigned a term paper of 10-20 pages.

There were, of course, variations on this system. Composition courses had 20-25 students, and we presented writing weekly. Language courses were more interactive, science labs were more “hands on.” Nevertheless, the *paradigm* (I am using the word advisedly and intentionally, as will be clear shortly) for higher education was the lecture course.

I learned in this system and, in my early years as a professor, taught in this way as well. When I began my teaching career as an Instructor and then as an Assistant Professor of Philosophy at the University of Massachusetts-Boston, I was given a courses schedule but not much advice on how to teach. Naturally, I reproduced the model I had experienced myself. This was not unique to me – it was standard practice at the time.

What has changed since I was a student, progressively and for the better, is the shift in American higher education from the *teaching paradigm* to the *learning paradigm*. These terms entered the discourse through a widely-read article in *Change Magazine* by Robert B. Barr and John Tagg published in 1995. Their work crystallized and gave expression to a line of

development in American teaching and learning that had been in the works for a couple of decades.

So, for the first part of my remarks, I want to describe this development and offer evidence that these are significant and substantial changes that are being adopted widely in colleges and universities in America. I believe that the learning paradigm provides a vantage point for understanding quality in higher education. Following that, I want to consider the basis on which universities are most commonly judged, and how the recent attention to international rankings of universities, in my view, misses the important learning dimension of quality.

I have made this my topic for this conference, because I believe that our collective interest in, and reliance on, international rankings of universities is the product of *globalism*. If we understand globalism to involve the diminishing of barriers to interaction and integration among the nations of the world, then I would say that higher education has “gone global” in two major ways. First is the rise in the numbers of students who study abroad *from* every part of the world *to* every part of the world. There are currently (as of 2007-08) over 600,000 international students studying at American colleges and universities. Who would have imagined that 6% of the student body at a regional campus in northwest Indiana would come to us from more than 30 nations? Second is the use of the internet that makes it possible to compare universities in detail for the purpose of study or academic cooperation. Information about every college and university in the world is literally at our finger tips. This information can be overwhelming, but a number of websites synthesize and evaluate this information – principally by ranking the world’s “top” universities. I will return to these ranking systems a bit later.

As I said, American Higher Education is in a paradigm transition with respect to one of its core functions, a transition from teaching to learning. Let us note, for the record, that virtually all state-supported public and major private American universities identify their core functions as teaching and learning, research or scholarship, and the transmission of knowledge for the public good (often called “service”). There are, of course, a relatively small number of colleges and universities that have more specialized missions. My remarks will concentrate on the teaching/learning function, for reasons that will emerge.

From the early 1970s through the 1980s in American higher education professors began to expand their pedagogy beyond the “lecture and examination” approach. These changes coincided with the rise of regional universities and the expansion of access to higher education by populations not previously served. This new pedagogy was encouraged by private foundations and the federal Fund for the Improvement of Post-Secondary Education (FIPSE). Its core was best expressed in a set of principles set down by Arthur Chickering and Zelda Gamson in an American Association for Higher Education Bulletin in 1987. The principles are:

- Encourage contact between students and faculty,
- Cooperation among students,
- Active learning,
- Prompt feedback,
- Time on task,
- Communicate high expectations, and
- Respect diverse ways of learning.

To teach in accordance with these principles, one must go well beyond lecture in the use of class time and well beyond the “mid-term and final” in the structure of assignments. Nevertheless, the emphasis was still on *teaching*.

The transition from a teaching focus to a learning focus was, I believe, propelled by the demands of the six American regional accrediting agencies that their member colleges and universities must assess student learning and demonstrate gains in student learning outcomes. This has been a difficult transition and, to some extent, it is still very much in process. Nevertheless, it is fair to say that the war is over. Assessment of student learning is a key part of the core practice of American higher education.

This transition was best articulated, as I noted previously, by Robert B. Barr and John Tagg in a now classic article in Change Magazine in 1995, *From Teaching to Learning: A New Paradigm for Undergraduate Education*. The article is an extensive defense of the value of this transition, but for our purposes it is enough to express the contrast:

Teaching Paradigm

- Provide/deliver instruction
- Transfer knowledge from faculty to students
- Offer courses and programs
- Improve the quality of instruction
- Achieve access for diverse students

Learning Paradigm

- Produce learning
- Elicit students discovery and construction of knowledge
- Create powerful learning environments
- Improve the quality of learning
- Achieve success for diverse students

Adoption of the learning paradigm guided a new constellation of pedagogies that are finding their way into American colleges and universities. The shorthand formula for this is the transition from “sage on the stage” to “guide on the side.”

More recently, researchers on higher education have put the value of the learning paradigm to the empirical test. In 2009, the American Association of Colleges and Universities published a document by George Kuh on “high impact educational practices.” These practices include:

- First Year Seminars
- Common Intellectual Experience (reading and discussing a book together across courses and disciplines)
- Learning Communities (small groups of students taking a collection of courses together with faculty guidance)
- Writing Intensive Courses
- Collaborative Assignments (group projects)
- Undergraduate Research

- Diversity/Global Learning
- Service Learning (learning in the course of doing social service)
- Internships
- Capstone Courses/Projects (Senior project-based courses that draw on the breadth of knowledge in the major)

Kuh examined student performance in relation to these practices and concluded that learning improves if every student has at least two of them. He attributes this to “time on task” and “sustained interaction with a faculty member” – two of the principles identified by Chickering and Gamson.

Better evidence that these practices have penetrated American higher education comes from the results of a survey that has been conducted in American colleges and universities for the past ten years. The National Survey of Student Engagement (NSSE) has been administered to freshmen and seniors at over 1400 universities to date. It surveys students on five categories of pedagogical practice:

- Levels of Academic Challenge
- Active and Collaborative Learning
- Student Faculty Interaction
- Enriching Educational Experience, and
- Supportive Campus Environment

NSSE questions are factual and descriptive. They ask students for information rather than opinion. I offer a few response samples to illustrate the point – and to demonstrate that it is possible to learn something about the extent to which the learning paradigm is taking hold.

In the survey of seniors:

- 81% said courses stressed applying theories to practical problems
- 94% said they worked harder than they thought they could to meet expectations

- 98% contributed to class discussion
- 94% made a class presentation
- 89% worked with other students during class
- 71% discussed ideas with a professor outside of class
- 83% talked about career plans with a faculty member or advisor
- 90% had serious conversations with students who have differing beliefs and values

This is but a sample of the aggregated answers. The NSSE survey is quite extensive. Of course, not all of the items had such high positive response rates. Nevertheless, these are extraordinarily high numbers that hold up across a wide variety of colleges and universities over a ten year period. I believe that this is strong evidence that the learning paradigm is taking hold in American colleges and universities.

How does this information show up in an assessment of the quality of American colleges and universities? For the most part, it doesn't. World ranking systems for institutions of higher learning are based on criteria that have virtually nothing to do with student learning, or for that matter, teaching.

Let me offer some examples.

The Times Higher Education QS World University Rankings unveiled a new set of performance indicators for 2010, which it touted as a more sophisticated methodology than it used in its 2004 to 2009 rankings. The 2010 rankings use the following criteria:

- Research indicators (55%)
 - Academic papers, citation impact, research income, research income from public sources, reputation survey
- Institutional indicators (25%)
 - Undergraduate entrants, degrees awarded, PhDs awarded, reputation survey (teaching), institutional income
- Ratio of international to domestic students (10%)

- International diversity
- Ratio of international to domestic staff
- Economic activity/Innovation (10%)
 - Research income from industry

Despite the fact that the word “teaching” appears in one of the criteria sets, I would point out that this indicator is reputational, based on opinion at a distance rather than data.

The second highly cited world ranking system is the Shanghai Jiao Tong University’s Academic Rankings of World Universities (ARWU). First published in 2003, this ranking system was originally intended to help China determine the global standing of its universities in terms of international prestige. It is now regarded as the most widely used annual ranking of the world’s research universities.” (The Economist, 2005)

The Shanghai Jiao Tong Academic Rankings of World Universities (ARWU) are based on the following criteria:

- Alumni winning Noble Prizes and Fields Medals
- Staff winning Noble Prizes and Fields Medals
- Highly cited researchers selected by Thomson Scientific
- Articles published in journals of Nature and Science
- Articles indexed in Science Citation Index – Expanded and Social Sciences Citation Index
- Per capita performance with respect to the size of the institution

For the purpose of assessing relative prestige, these criteria are reasonable. They are data driven and contain no “reputational survey” (opinion laundered to become quantitative). Based on these criteria, the “Top 10” in 2009 were: Harvard, Stanford, UC Berkeley, Cambridge, MIT, CIT, Columbia, Princeton, University of Chicago and Oxford. The first Chinese Universities (Nanjing, Peiking and Shanghai Jaio Tong) appear in the (undifferentiated) 201-301 category. The first non-Anglo-Saxon European University is ranked 23: Swiss Federal Institute of Technology - Zurich.

My point, however, is that these rankings are used to make judgments about the quality of universities more generally. Every university on the top of this list, and every other university that is not so highly ranked, has a mission that is a good deal broader than “prestige” in the area of research. A judgment about a part can hardly stand as a representation of the whole.

In the USA, the rankings “game” is dominated by *US News and World Report*, a magazine that produces an annual issue devoted to ranking American colleges and universities. Its criteria are significantly different from the research-dominated world ranking systems. The *US News* methodology seeks to capture a more balanced sense of the missions of American universities. It is more oriented to student success factors than to faculty productivity in research. It also subdivides American colleges and Universities by type, region and mission so, for example, regional universities are not ranked in the same category as national universities. That said, the ranking criteria are as follows:

- Peer assessment (25%)
 - Reputation among presidents, chief academic officers and registrars
- Retention (20% for national universities)
 - Entering freshmen, fall to fall
- Faculty resources (20%)
 - Class size, faculty salaries, highest degree, student-faculty ratio, proportion of full-time
- Student Selectivity (15%)
 - Entering student SAT or ACT scores, top 10% of high school class, rejection rates
- Financial Resources (10%)
 - Per student spending
 - Graduation Performance (10% for national universities)
- Alumni Giving (5%)

Whatever its faults, this ranking system does identify some criteria that are relevant to assessing the learning environment for students. In this regard, however, it is much more indirect than the NSSE survey that I outlined earlier.

US News has also entered the world rankings arena. In this regard, it is using the QS data – the same data base used by Times Higher Education rankings- but with its own methodology. Needless to say, with this foundation, *US News* world rankings revert to the restricted mission focus of faculty prestige.

To mention one more effort on the international scene, the European Union is also entering this game. A German/Dutch/Belgian/French consortium for Higher Education and Research Performance Assessment is scheduled to test a ranking system on engineering and business studies in 2010. The motivation seems to be defense. A Euobserver article on this development cites France arguing that “the selection criteria of existing rankings favor Anglo-Saxon higher education institutions to the disadvantage of French and other European universities.”

If we have reached the point where the design criteria for ranking systems are selected to produce a particular result, we have probably reached the point where we should abandon the effort. The antidote to a biased ranking system is not a differently biased ranking system.

I am not arguing against comparing universities. I believe that there are many good reasons to make comparative judgments. The most obvious, student and parent selection of a place to study are ill served by ranking systems that ignore student learning outcomes. If the intention of the rankings is to determine where Chinese universities stand in the prestige pecking order, the ARWU meets that need. In that restricted universe, rankings have a place. My point is that comparative judgments should be driven by the needs and interests of those seeking the information. “Off the shelf” ranking systems tend to obscure the variety of reasons one might wish to make comparisons and, in the case of the current crop of ranking systems, they obscure critical mission functions of the universities they rank.

For those willing to work a little harder at comparison with a purpose, there is, in America, the Voluntary System of Accountability, a set of fairly comprehensive, standardized data that 333 public universities (members of the Association of Public Land Grant Universities and the American Association of State Colleges and Universities) have committed to publishing about

themselves. This data includes as an option (one of four) the university's NSSE survey results. But this is a topic for another time.

My point, to sum it up, is that in today's world, many students have the option of studying anywhere in the world. To make informed decisions, they have world university ranking systems that ignore what is arguably the most important consideration for making a decision: an effective learning environment. Since student learning is a core mission of most universities in the world, this seems to me to be an egregious oversight. But, perhaps, *oversight* is the wrong word. The learning paradigm is not yet so deeply and thoroughly embraced that it has supplanted prestige as the key differentiator of institutional quality. And there is our 21st Century global challenge for higher education.