

Hunter Rawlings
President, Association of American Universities
Testimony before the Joint Oversight Committee on Higher Education
Governance, Excellence, and Transparency
To be delivered September 21, 2011
Submitted September 14, 2011

Thank you for this opportunity to testify. I am Hunter Rawlings, President of the Association of American Universities, an association of 59 leading public and private research universities in the U.S. as well as two in Canada. We are located at 1200 New York Avenue, NW, Suite 550, Washington, DC 20005. I can be reached at 202-408-7500 or hunter.rawlings@aau.edu.

Texas in the past several months has become the epicenter of public debate about the function of public higher education, its cost, its productivity, and its value to students. The debate has been at all times highly visible, often acrimonious, and, by now, helpfully moderated by Chancellor Cigarroa's carefully crafted vision for excellence for the University of Texas System.

This kind of conflict is inevitable at a time of financial stringency, when so many people are out of work, state agencies and institutions face layoffs, and so many public universities endure repeated cuts in state funding. All Americans want to ensure that every public dollar is being employed wisely and efficiently, and that every leader is providing strict stewardship. Public accountability is proper and necessary, and no sector should be exempt from its requirements. Transparency is therefore essential, but because public research universities are incredibly complex institutions, it is difficult for anyone to understand the way they work, or to measure their "output." Their finances are complicated, their structure is opaque, and most of what they do has no clear bottom line, no short-term results reducible to a quarterly report.

And yet the public now wants such evidence of performance from its universities, and it wants transparent, understandable measures of productivity. Political leaders want greater efficiency, lower costs, shorter times to degrees, higher graduation rates, and greater emphasis upon teaching and learning along with less emphasis upon research, which seems remote from everyday life, expensive, and seemingly at odds with teaching, or at least a drag upon it. Such demands are, again, understandable at a time like this.

The temptation under these circumstances is to subject research universities to the corporate model: cut costs, reduce personnel, apply financial tests in evaluating faculty, measure quantity, not quality, demand greater productivity. But research universities are not for-profit companies, and while that does not exempt them from the need to be efficient, it does require us to ask some fundamental questions, the most important of which is this: What do we want universities to produce? That is the essential question: what should they produce? Thousands of cheap degrees – cheap in content as well as dollars? Warrants certifying that their graduates are ready for jobs, any jobs? Research grants, no matter what department faculty members belong to, patents and licenses, whatever the discipline?

Such criteria are superficial and ill-suited to universities. They reduce the classroom to an assembly line, the library to a book repository, and the laboratory to a for-profit business. And they fail utterly to differentiate among disciplines that range from philosophy to plant science, from economics to engineering, from music to law. Above all, they do not address what universities turn out: people, not products, thinking individuals, not cogs in a machine, new knowledge and new ideas, not mute objects. You can't measure universities with a blunt instrument.

But such difficulty in measuring universities does not mean that they should be immune to review and scrutiny. Individual faculty members face constant evaluation, from annual performance reviews, to departmental program reviews, to the incredibly competitive peer reviews of research grant proposals by federal agencies, to publication reviews for articles and books, to student evaluations of teaching. Faculty members are among the most heavily reviewed professionals in this country.

What is not so well reviewed at universities is the curriculum offered by the faculty as a whole. Here we should do better in molding a coherent set of courses that will enable students to learn what they need to become critical thinkers who can separate unfounded claims from well-supported arguments, who are scientifically and mathematically literate, who can speak and write clearly and cogently, and who know something about their country's values and the world's remarkable diversity.

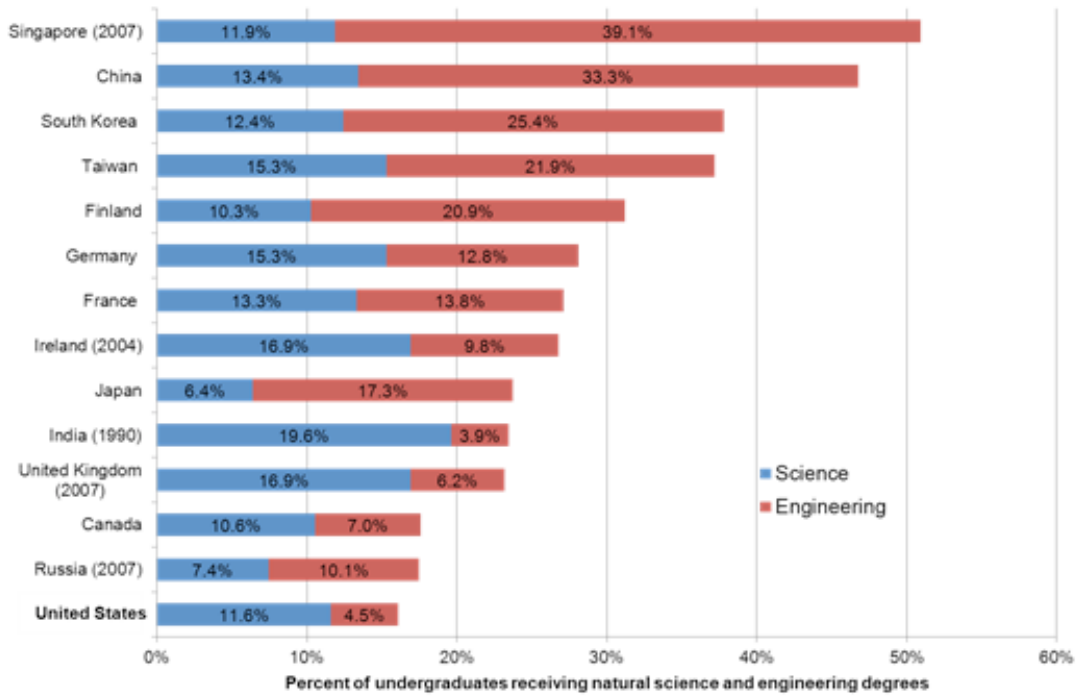
In its most recent employer surveys (2007, 2008, and 2010), the [Association of American Colleges and Universities](#) (AAC&U) found that the vast

majority of employers say they are less interested in specialized job proficiencies than in critical thinking, analytic reasoning, teamwork, and communication skills – the broad intellectual and social competencies available through a liberal arts education.

We therefore need to improve the teaching particularly of freshman and sophomore courses in order to increase student engagement, introduce best practices of pedagogy, and inspire students to want to learn more.

For example, as the role of science and technology in our daily lives and the affairs of the nation steadily increases, it becomes increasingly important that students acquire mastery of these components of a liberal education. The organization I represent, the Association of American Universities, has just announced a five-year initiative to improve teaching and learning in science, technology, engineering, and mathematics – the so-called STEM fields – in order to reduce the drop-out rate among science majors, enhance student performance and interest, and raise America’s production of engineers, which lags behind that of many other developed countries. The truth is that we are not doing as well as many of our competitors in teaching science and math to undergraduates.

The STEM workforce depends heavily upon our system of higher education. More than two-thirds of STEM workers have at least a college degree, compared to less than one-third of non-STEM workers. STEM workers earn 26 percent more than their non-STEM counterparts, and STEM degree holders earn more than non-STEM degree holders, whether they work in STEM occupations or not. Yet, according to the OECD, in 2009 the U.S. ranked [27th out of 29](#) developed countries in the percentage of students who earned bachelor’s degrees in science or engineering. (See chart below.)



Source: NSF S&E Indicators Appendix Table 2-35.
Data for 2006 or most recent year.

This is one of many things we should be doing within universities to improve our performance. Most of these changes address quality, not quantity. That is because in a knowledge-driven world, where universities are the principal generators of knowledge and thinking beings, it is quality that counts.

Universities are long-term institutions: they are here to stay, they educate students for a lifetime of learning and work, their faculty members make discoveries that benefit the world for centuries. As a result, it is easy to measure their quality over the long term, but very tough to measure it in the short term. We know, for example, that almost all the best universities in the world in the 19th century could be found in Germany. By the early 20th century, British universities began to rival their German counterparts. American universities were far behind, and remained so until the second half of the 20th century. In the past 60 years, however, our research universities have surpassed those of other countries, and now dominate the top 20, top 50, and top 100 lists worldwide. Why and how has this happened?

Since the end of World War II, when the federal government began to fund university research and scholarship at American universities, this partnership

has helped our universities to develop into the best in the world, and the world knows it. Top students pour into our universities from Europe, Asia, Latin America and Africa because they want an American education. Until recently, these were almost exclusively graduate students, coming here to earn doctorates, funded by research grants won by the faculty. Today, the streams of graduate students from abroad have turned into torrents of undergraduates, many of them from China, where there are only a few top universities that smart, ambitious Chinese want to attend. The world's best students now come here for an education, and they pay for it with their own money, or with the support of their governments' money. They add to the talent in our classrooms and laboratories and libraries, and help to shape the direction and conduct of our research. Unlike other domains in our economy, higher education is a net importer.

But our research universities don't just bring in students. They are our chief source of new ideas and innovation. More than half of U.S. economic growth since World War II directly results from technological innovation, much of which stems from scientific, medical, and engineering research at our universities. Such groundbreaking research has created vaccines, lasers, the MRI, Global Positioning Systems, the Internet, and thousands of other inventions that have improved our health, grown our economy, and made this country stronger and more secure. Look where modern companies want to locate: in cities like Austin, where a major research university offers access to leading ideas, to top research labs, to talent from around the world, and to a community of critical thinkers operating in a free intellectual environment.

All of this sounds positive for America. But the picture is about to change: other countries have noticed what has made America exceptional in a global knowledge-based economy. China, India, Singapore and other Asian countries are, right now, pouring money and effort into emulating American universities. They are building modern research labs, residential campuses on the American model, entirely new research universities, and they are hiring American professors, many of Asian descent, to teach their students and conduct their research. And they are poaching our professoriate at precisely the time when we are growing weaker: constant cutbacks at our public universities have left us vulnerable to competition, particularly for renowned research faculty who win Nobel Prizes and make discoveries that lead to innovation and technology transfer.

One of the characteristics of the American research university that these countries are incorporating into their rapidly improving research universities is the close interconnections between research and graduate education. In our universities, these two activities are conducted together, and both activities are the better for it: the education of graduate students is enriched by direct engagement in research with their faculty mentors, and the quality and productivity of university research is increased by the energy and creativity of graduate students.

Here is another area where we are working to improve. We are expanding this connection between research and education to the undergraduate level. The AAU STEM initiative that I described earlier includes this component. And a remarkable example of the inclusion of research in undergraduate education is occurring right here in Austin in UT-Austin's Freshman Research Initiative. The Freshman Research Initiative (FRI) in the College of Natural Sciences offers first-year students the opportunity to initiate and engage in authentic research experiences with faculty and graduate students in areas such as chemistry, biochemistry, nanotechnology, molecular biology and computer sciences. Students emerging from FRI have experience with experimental techniques and lab work, possible publications, and a deep understanding of the scientific process. This is the kind of initiative that I hope AAU's STEM initiative will help spread around the country.

Today we are witnessing an unprecedented level of competition among countries to create and maintain the best research universities in the world. This is because everyone recognizes that economic prosperity depends, as never before, upon knowledge, innovation, and an educated citizenry. It is paradoxical that just as the world is mobilizing to emulate American research universities and to take our most creative faculty members, we are reducing our public investment in these universities year after year.

The very institutions that have been one of the principal engines of our economic growth since World War II are not just becoming more efficient, which is of course desirable, but are being forced to reduce needed personnel, eliminate courses and indeed entire fields of study, increase class size, and, of course, raise tuitions.

As Americans, we all share a responsibility to leave a better country to our children and grandchildren. There are growing concerns among many Americans that we are not going to be able to do this. It seems to me that

undermining the fundamental strength of our nation's public research universities will help put us on the road to decline. Instead of arguing among ourselves about the value of our great universities, let's give them the support they need to succeed in today's global competition for new ideas, new discoveries, and the most talented professors and students.