Higher Education's Faculty Productivity Gap: The Cost to Students, Parents & Taxpayers

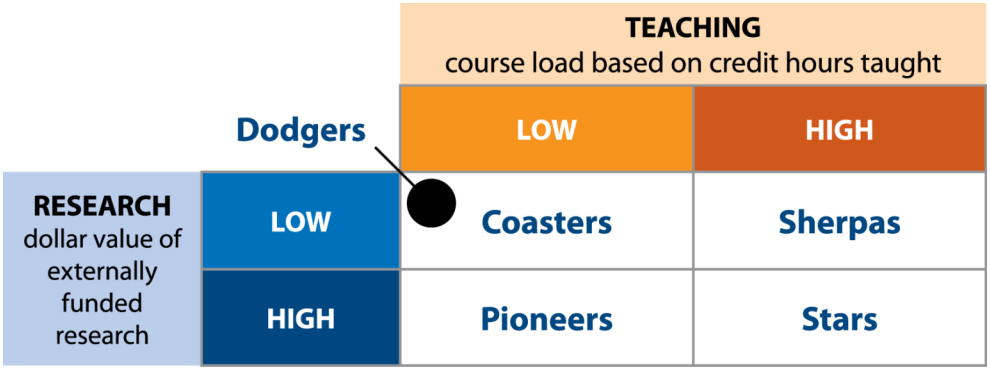
By Richard F. O'Donnell

Faculty performance data released by Texas A&M University and the University of Texas – the only two major public research universities in the country to have released such detailed data – for the first time shines a bright light on higher education's faculty productivity gap. The data shows in high relief what anecdotally many have long suspected, that the research university's employment practices look remarkably like a Himalayan trek, where indigenous Sherpas carry the heavy loads so Western tourists can simply enjoy the view.

The problems with a trek-like employment model, however, are many:

- students and taxpayers are charged hundreds of millions of dollars more than necessary to subsidize low productivity;
- top scholars who bring in almost all the research funding see large amounts of their grants siphoned off to pay for the overhead of their less productive colleagues;
- thousands of students are deprived of opportunities to learn from the most senior faculty members, raising troubling questions about quality; and,
- the faculty who do the most teaching perform under working conditions that make them second or third class citizens, with low-pay, few benefits and little, if any, job security.

An analysis of the UT and A&M faculty performance data show that faculty can be categorized one of five ways, which I've labeled for ease of understanding, based upon how many students they teach in an academic year and how much externally funded research they do.



Dodgers are the least productive faculty, who bring in no external research funding, teach few students and cost nearly ten times as much as Sherpas to teach one student one class; in essence, they've figured out how to dodge any but the most minimal of responsibilities.

Coasters are mostly faculty protected by tenure and seniority, which gives them reduced teaching

loads and yet they don't produce significant research funding. Their cost to teach one student one class is five to six times that of Sherpas.

Sherpas do all the heavy lifting on the teaching front and bear a disproportionate part of the teaching load; they are mostly adjuncts or other non-tenured faculty. Sherpas are what the American Association of University Professors (AAUP) terms contingent faculty who, to support themselves, "often commute between institutions and prepare courses on a grueling timetable, making enormous sacrifices to maintain interaction with their students."[1]

Pioneers are the highly productive research faculty, measured by external research dollars raised, who use their research grants and contracts to buy "released time" from teaching to blaze new trails in research, most often in science, technology, engineering and related fields.

Stars are highly productive faculty who do a lot of teaching and a lot of funded research.

My research assistant, a current UT Austin undergraduate student, and I examined the teaching loads and research funding of faculty compared to their labor and associated overhead costs. Normalizing for part-time and full-time faculty, and excluding full-time administrators who still may teach one course (like UT's president), we found tremendous disparities among the different faculty cohorts at both universities.

UT Austin Faculty Profile

Faculty Cohort	Number of Faculty	Percent with Tenure or on Tenure Track	Average Number of Students Taught in a Year	Average External Research Funding Award	Total Cost to University (Salary, Benefits Overhead) of Faculty Cohort	Average Cost to Teach One Student One Class	Cohort Teaching Load v. Cost
Dodgers	1,748	58%	71	$0	$573,706,355	$4,613	Teach 26.5% Cost 53.6%
Coasters	1,280	68%	112	$185,128	$436,813,765	$3,044	Teach 30.6% Cost 40.8%
Sherpas	856	7%	213	$0	$87,694,180	$480	Teach 38.9% Cost 8.2%
Pioneers	54	56%	65	$3,077,729	$-33,097,218	$-9,400	Teach 0.8% Cost -3.1%
Stars	30	67%	503	$713,217	$6,123,279	$406	Teach 3.2% Cost 0.6%

At UT Austin, there are 1,748 faculty members who consume 54% of instructional costs but teach only 27% of the student hours and generate no external research funding. To put this in perspective, if UT had no Dodgers, who are the least productive faculty members, teaching loads for the next lowest productive faculty (Coasters) would need to increase by an average of 97 students a year, giving the university annual savings of $573 million. That's enough to completely eliminate tuition and still have $65 million left over to refund to the state taxpayer, who could use it to hire, for instance, 1,407 K-12 teachers.

Keep in mind, increasing the teaching load for Coasters by 97 students would mean they only need to teach 209 students a year – that's three classes per semester of 35 students each, hardly causing large class sizes. Plus, these professors would still have a minimum of 21 weeks, and in practice more like 28 weeks, each year of vacation or time to spend on research.

If this sounds too unrealistic, UT could set a standard that Dodgers teach just *half* as much as the Sherpas, while everyone else's teaching load remains the same. Under this scenario Dodgers would have to teach on average 36 more students per year. That is a total of just two classes per semester of 35 students each (or three classes per semester of just 23 students each), also with at least 21 weeks of vacation or time to spend on research. If current compensation levels for these faculty were maintained, the university would have 582 more Dodger faculty than it needs. Reducing the size of the faculty by these 582 appointments through attrition and early retirements would eventually save $191 million annually, enough to cut UT's tuition 37.6%, from $9,418 to $5,876.

Texas A&M Faculty Profile

Faculty Cohort	Number of Faculty	Percent with Tenure or on Tenure Track	Average Number of Students Taught in a Year	Average External Research Funding Award	Total Cost to University (Salary, Benefits Overhead) of Faculty Cohort	Average Cost to Teach One Student One Class	Cohort Teaching Load v. Cost
Dodgers	1,123	74%	88	$0	$421,657,421	$4,281	Teach 19.0% Cost 46.3%
Coasters	1,047	77%	123	$174,755	$366,954,512	$2,854	Teach 24.9% Cost 40.3%
Sherpas	966	10%	286	$0	$119,320,492	$431	Teach 53.5% Cost 13.1%
Pioneers	24	58%	97	$1,925,947	$-3,330,687	$-1,434	Teach 0.4% Cost -0.4%
Stars	19	79%	574	$277,674	$5,262,557	$482	Teach 2.1% Cost 0.6%

Lest anyone think this is just a problem at UT, the same analysis of Texas A&M data shows very similar faculty performance results. The Sherpas at Texas A&M teach an extraordinary 54% of the student hours but incur only 13% of total faculty cost. Meanwhile, the Dodgers (who, like the Sherpas, bring in no external research funding) teach only 19% of student hours but account for 46% of total faculty costs.

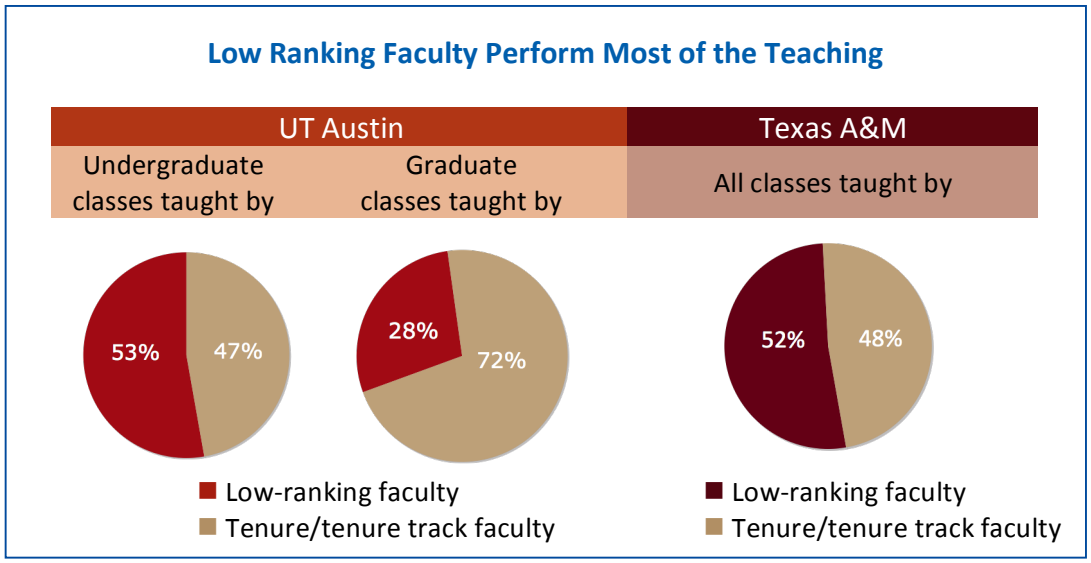
Consider that if A&M had no Dodgers, teaching loads for the next lowest productive faculty (Coasters) would need to increase by an average of 94 students a year, giving the university annual savings of $421 million. That's enough to completely eliminate tuition and still have $112 million left over to refund to the state taxpayer. Increasing the teaching load for Coasters by 94 students would mean they only need to teach 217 students a year – that's three classes per semester of around 36 students each (with 21 to 28 weeks of vacation or time to spend on research).

A&M could set a standard that the least two productive categories of faculty, Dodgers and Coasters, teach just *half* as much as the Sherpas, while everyone else's teaching load remains the same. Under

this scenario Coasters would have to teach on average 20 more students per year and Dodgers 55 more. If current compensation levels for these faculty were maintained, the university would have 578 more Dodger faculty than it needs, and through attrition and early retirements could eventually save $216 million annually, enough to cut A&M's tuition 70%, from $8,481 to $2,544.

How did teaching loads get to be so light?

UT and A&M follow a labor model similar to most other research universities in America, one that has developed over decades. At UT Austin, adjuncts and teaching assistants teach a majority (52.7%) of undergraduate credit hours. Even at the graduate level, low-ranking faculty teach nearly a third of the student credit hours (28.3%). At Texas A&M, whose data doesn't distinguish between undergraduate and graduate, adjuncts and teaching assistants teach 52% of all student credit hours. With tenured and tenure track faculty not performing the majority of teaching, particularly of undergraduates, it raises important questions about teaching quality.



As long ago as 2001, AAUP officials complained:

> The exploitation of graduate students and the abuse and overuse of adjunct and non-tenure track faculty is the most prominent characteristic of a new employment strategy sometimes referred to as the two or multi tiered labor system. This new academic labor system has emerged over the past thirty years and is firmly established in higher education. It constitutes a threat to the teaching profession and if left unchecked will undermine the university's status as an institution of higher learning.[2]

As many from inside and outside the academy have chronicled elsewhere, the tenure system in higher education encourages a tenure track professor to work extremely hard to get tenure and then, all too often, retire on the job at 35-45 years old, whenever he or she gets tenure. Here is how a senior professor, who's been a tenured faculty member at more than one AAU university, described to me what happens next:

Since most of the day-to-day power over the working environment of a faculty member is in the hands of their department chair, the tenured professor sucks up to the chair or helps the chair informally in all kinds of ways and, the next thing you know, the chair gives him one course of "released time" to perform "service" or other duties (except teaching). Everyone wins (who counts): The professor and the department chair. The only loser is the student, who has less access to senior faculty, the taxpayer and the adjuncts who pick up the teaching load.

Tenured faculty learn how the system works to get "released time" from teaching. For example, they can become the advisor to lots of MA and Ph.D. students, serve as the chair of major department committees, head up a blue ribbon panel in the community (and get rewarded with "released time" to help the community and bring recognition to the university). Most departments give a professor "released time" if they are elected or appointed to a position of leadership in their professional association.

This raises another issue on costs. Few professional meetings are held in the Motel 8 that many taxpayers go to. Most, in fact, are held in very nice venues that the university pays for through travel, lodging, and *(don't forget)* registration fees. In most research universities professors get their travel and expenses for one meeting a year and *any* meeting where they are on the program to give a paper. That's why professional associations started the massive use of "break-out" sessions…so more of their members could be "on the agenda" and thus get their travel and *registration* fee paid.

If you have not yet read "Fat City," a short article by a self-admitted Coaster (my term, not his) it provides what many professors have told me is the best single rendition they have read on the life of a tenured faculty member in a major research university. Be sure to read the response and counter response to the article as well.[3]

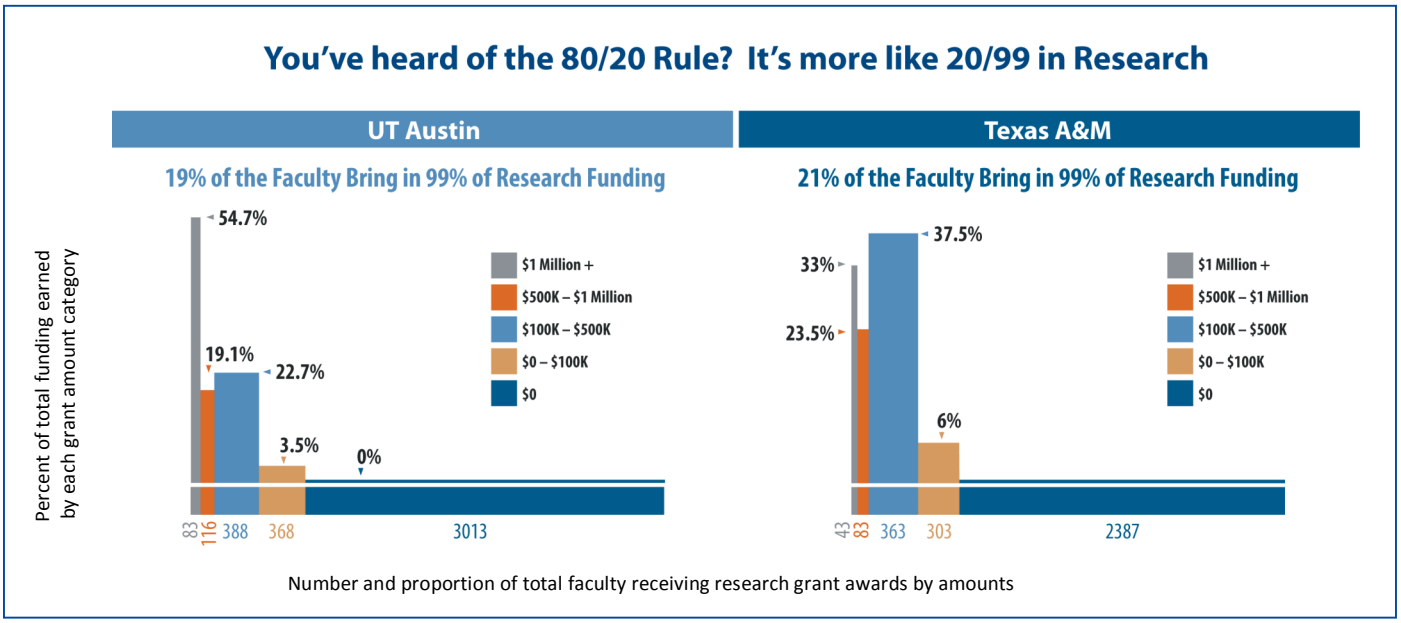
Is every faculty member who has been categorized as a Dodger or Coaster in the above analysis guilty of these behaviors? Of course not. There are those who use the almost total freedom given them by tenure (and almost total lack of accountability, the other side of the coin) to set an agenda that includes a very heavy workload of teaching, working with students – and not just advising but actively mentoring and coaching and helping them to get jobs and then to advance – working pro-bono in the community or for an organization where their expertise can be applied, outside consulting and service to the university. Unfortunately, however, the data reveal that these may be too few and far between.

What about research?

Some may counter that although these faculty have light teaching loads, it is because they are doing research. But the facts show otherwise. At UT Austin, 19% of the faculty bring in 99% of research funding, leaving 3,013 faculty who bring in no research grants. At Texas A&M, a mere 21% of the faculty bring in 99% of the research funding, leaving 2,387 faculty bringing in zero.

It is true that not all scholarship and research of value is externally funded, but without the peer review process embedded in external funding, there are few internal university measures to evaluate on an objective and systematic basis if the hundreds of millions of dollars of student- and taxpayer-financed faculty time each year that is spent on this research is leading to important discoveries that advance knowledge, improve society or human well-being, or improve teaching and learning. Some

taxpayer-funded research, if it sees the light of day at all, will be published in largely obscure, thinly read academic journals, many of which are also funded by taxpayers, directly or indirectly.



Furthermore, many faculty who bring in the most external research funding also carry heavy teaching loads. The reason is that most research is very labor intensive – in the hard sciences (monitoring equipment; compiling data), in the social sciences (collecting data, administering experiments, etc.) and even in modern humanities research where scholars are using labor-intensive methodologies like content analysis, oral histories, etc. If you are a big-time researcher, you need access to the best of the best graduate students. The best way to do that is to teach. When you teach you are a magnet for the best students because (1) you have a big name. Even more enticing, (2) you have graduate research assistantships to hand out, so students want *you* to know *them*. Finally, (3) if a student works with a high-performing researcher, the student has a good chance to get his or her name on a publication, even *before* they get their Ph.D. The bottom line is that high-performing researchers are also high-performing teachers for very self-interested reasons: The search for talent.

What about Quality?

UT Austin President Bill Powers has criticized assessments of faculty performance data because, he says, "there is no attempt to measure the quality, and therefore the true productivity, of the learning experience."[4] At one level he is correct, but only because UT has not provided data (although it's been requested) on each faculty member's student evaluations and grade distributions. With this data, one would be able to ask questions such as:

- Which category of faculty do students tend to evaluate higher – is it Sherpas or Dodgers? Do adjunct or tenured faculty have higher student ratings? How are TAs rated?

- Do certain colleges or departments receive significantly different student ratings, and if so, why?

- What do grade distributions tell us about maintaining high expectations and combating grade inflation? (And should student evaluation data be statistically adjusted to account for faculty who are easier graders and thus may encourage better ratings?)

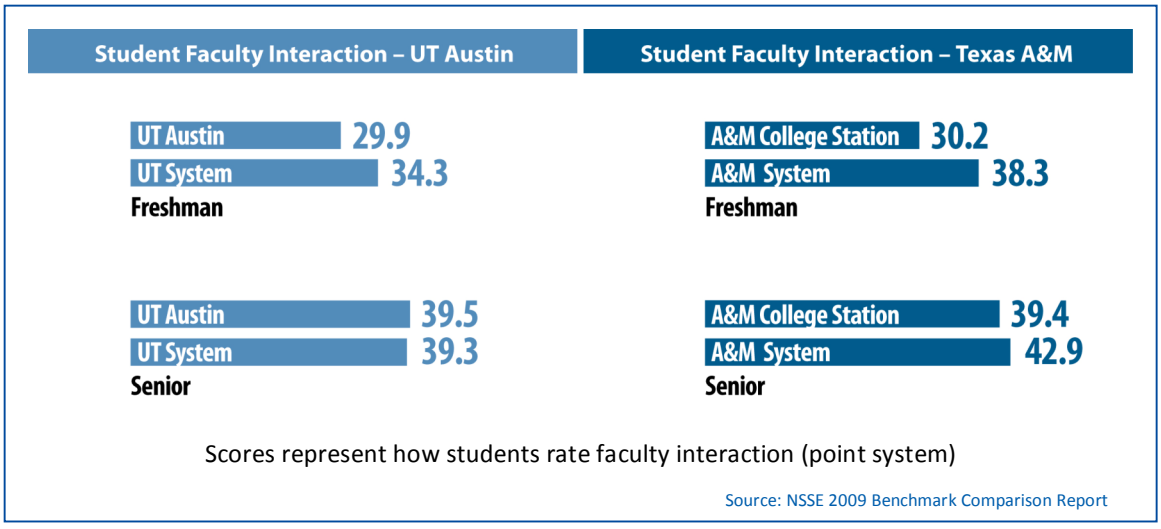
Student evaluations are clearly not the only way to measure the quality of the learning experience. They are, however, the only consistent measure that exists today for every teacher within the university and thus should be a vital part of any faculty performance system.

At another level, however, Powers' criticism of analyses of faculty performance data is misdirected because the indifference to measuring quality and assessing performance of student learning is endemic inside major public research universities.

How does UT (or any major public research university) actually measure learning and the value it adds? How does it ensure that *every* undergraduate who earns a diploma graduates with the critical thinking and writing skills – skills that employers consistently state they find lacking in too many college graduates? Are PhD graduates actually able to find tenure track jobs in their field? Is there a systematic, rigorous, independent and auditable review process in place to evaluate the quality of teaching for each faculty member? Is it peer review only? Does it also include student evaluations?

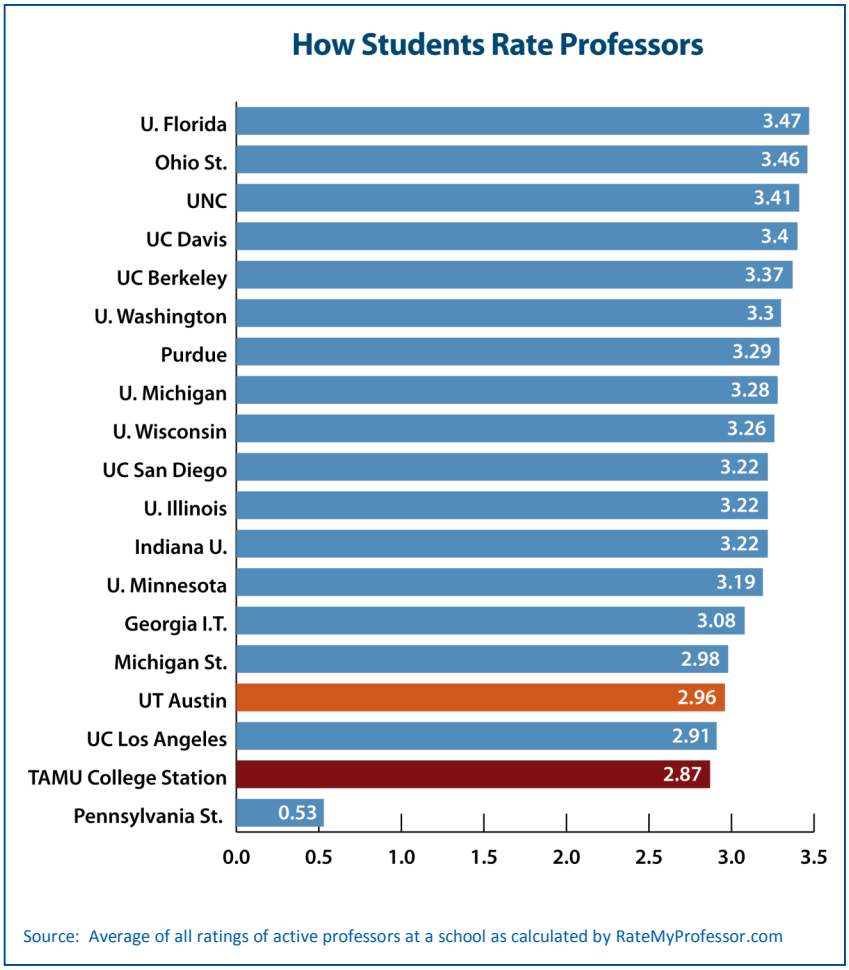
With more than 50% of the undergraduate student credit hours and nearly a third of the graduate credit hours at UT taught by adjuncts, and over 50% of all credit hours at A&M taught by adjuncts, the question of teaching quality is of vital importance. One AAUP official has said, for example, that "the overuse and abuse of contingent faculty is an instructional issue. Adjuncts and graduate students do often deliver excellent instruction, but I must emphasis this is in spite of the institutions rather than because of them. Most adjuncts are so poorly paid that there are powerful disincentives to quality instruction."

In the absence of UT and A&M providing student evaluation and grade distribution data, one may turn to alternatives, which raise questions of whether the quality of the learning experience at UT and A&M can be strengthened. The National Survey of Student Engagement, for example, shows that faculty at the UT and A&M flagship campuses are less engaged than faculty at sister campuses within their systems.



At websites such as Rate My Professor and MyEdu, students are rating and commenting on hundreds of thousands of faculty across the nation. Using RateMyProfessor.com data, compared to their peers, UT Austin and Texas A&M rank near the bottom in terms of how students rate their professors.

The fact that UT and A&M are lower than their peers and sister campuses on such vital measures as faculty-student engagement and professor rankings raises important questions about the governance of higher education in Texas and if there has been an indifference to measuring quality and assessing productivity.



The reality is that UT and A&M, along with most other public research universities, have in place limited and weak processes to actually measure student learning outcomes and improve the quality of the learning experience offered by each and every teacher put in front of students – from TAs to adjuncts to 20-year tenured professors.

One final note on quality. For those who believe small class sizes are critical for quality (something Harvard Business School, which regularly teaches sections of 90 students or more, challenges as does the latest blended learning pedagogy), increasing teaching loads and faculty productivity does not mean dramatically increasing class sizes. As pointed out above, for Dodgers at UT to teach just *half* as much as Sherpas (for significantly more pay), they would need to teach on average just two classes per semester of 35 students each (or three classes per semester of just 23 students each), plus they would still have 21 to 28 weeks of vacation or time to spend on research each year. Is that truly asking too much?

Even former UT Austin arts and sciences dean and Boston University President Emeritus John Silber said recently that the "cost of education is largely a function of the reduction of productivity in the faculty, and also the huge engorgement in administration.... Today, in a typical university like Boston University or Harvard or Yale or Princeton, professors will teach one to two courses per semester. Well, that's not enough. Three courses a semester is perfectly reasonable, or put it another way, a total of 100 students – something like that."[5]

The First Step in Closing the Productivity Gap

Like many things in life, the first step toward a solution is acknowledging there is a problem and diagnosing it correctly. UT and A&M have taken important steps in producing the data, although student evaluation and grade distribution data are still not publicly available. Boards of other public and private universities should request disaggregated faculty data as well, in order to analyze how many Dodgers, Coasters, Sherpas, Pioneers and Stars they have, and to quantify clearly what the productivity crisis may be costing students, parents and taxpayers.

Undoubtedly there are many ways to slice and dice faculty performance data to measure productivity. There will no doubt be critics to my approach and some who would shoot the messenger. But both UT and A&M – and every other university – have an obligation to students and taxpayers to answer this fundamental question:

> If 50% or more of undergraduate student credit hours are taught by low-ranking faculty (TAs and adjuncts), are students getting a poor quality education? Or, if these teachers actually are effective teachers, then are students and taxpayers paying hundreds of millions of dollars too much for the Coasters, Dodgers and other highly privileged and highly paid within the university, who are living on lifetime sinecures while doing little teaching or funded research?

UT and A&M need to dig further into this data and its implications by asking:

- Is the productivity gap more or less acute in particular colleges and departments and if so, why? Is it due to poor leadership, management policies or other reasons?

- Are there significant disparities between campuses – e.g., does the productivity of the economics department at UT Austin vary significantly from the economics department at UT Dallas, UT San Antonio (or even Texas A&M) – and if so, are the disparities justified beyond anything but bloated overhead and bureaucratic morass?

- Are policies establishing minimum faculty teaching loads effective if they allow this level of unproductivity? How can the policies be strengthened or replaced with something better? What incentives would encourage more and better teaching by senior faculty?

- Who are the Dodgers and Coasters and has a "Fat City" culture been allowed to flourish in any part of the university?

- How do we ensure the quality of teaching undertaken by the Sherpas, many of whom are part-time or teaching assistants (who tend to be fellow students)? Do we have policies in place that promote the dignity of those bearing the burden of teaching and that reward and attract the best of them?

- Who are the Pioneers and Stars, and how do we identify and recognize them, honor them and attract more of them to our universities?

- Do policymakers and regents have a fiduciary and moral obligation to change the research

university's Himalayan-trek-like labor model so that students can be ensured of greater learning opportunities with senior faculty while generating hundreds of millions of dollars in productivity savings that can be used to reduce tuition and make college more affordable?

There can be many different approaches to closing the faculty productivity gap, but first, state policymakers, university boards and senior university leadership must acknowledge a significant gap even exists and not flinch from taking a hard look at the data.

With more mission-driven resource allocation and more accountability for how resources are actually used, our universities can not only save students and taxpayers hundreds of millions of dollars, but we will have senior faculty spending more time teaching students in the classroom, more time working with students – both in the office advising or doing research in the laboratory or the field – and more resources directed to teaching and to research that involves students. Achieving that is the path to excellence of the first-class. ■

Rick O'Donnell has spent more than 15 years as a public policy reform leader, including as executive director of the Colorado Department of Higher Education and executive director of the Colorado Department of Regulatory Agencies. Most recently, he served briefly as special advisor to the University of Texas Board of Regents. Learn more at HigherEdIdeas.com.

Notes on Methodology

The data used in these analyses are for fiscal year 2010, the most recently available faculty performance data from both UT and Texas A&M. The basic methodology is similar (but with a few significant differences) to that used by both Alvarez & Marsal Public Sector Services, LLC in its study "Instituting Higher Education Reform: Opportunities for Texas' Higher Education System" (a copy of which is available at HigherEdIdeas.com) and the Center for College Affordability and Productivity (CCAP) in its "Faculty Productivity and Costs at The University of Texas at Austin: A Preliminary Analysis" (available at centerforcollegeaffordability.org).

To measure the institutional cost for each faculty member, an overhead factor was derived using financial data reported by UT and A&M to the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS). For Texas A&M, the calculation is that for every $1 spent on faculty labor costs there is an associated $2.17 in overhead. For UT Austin, the rate is $2.12 for every $1 of labor costs.

We calculated the cost of each individual faculty member using the following equation:

Individual Total Loaded Cost = (Salary and Benefits x Overhead) - (FY Research Funding / Overhead)

One significant difference between our numbers and those used by CCAP is for UT Austin we multiplied salary and benefits by $3.12 rather than $2.12. To apply $2.12 of overhead for each dollar of labor costs, one would either *add* $2.12 of overhead to each $1 labor or multiply $3.12 by $1, not multiply by $2.12 as the CCAP study did, which resulted in an understating of Individual Total Loaded Cost.

Faculty were categorized into Dodgers, Coasters, Sherpas, Pioneers or Stars based upon if they brought in external research funding and upon their cost per student taught. Using cost per student taught normalizes part-time and full-time faculty in this analysis. Additionally, full-time administrators as identified by UT in the data, who may teach only one course like the president, are excluded from these calculations.

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[1] "Background Facts on Contingent Faculty", American Association of University Professors, website as of July 14, 2011: http://www.aaup.org/AAUP/issues/contingent/contingentfacts.htm.

[2] "The New Academic Labor System", Richard Moser, AAUP Associate Secretary, June, 2001.

[3] "Fat City: Thank you, Illinois taxpayers, for my cushy life," David Rubinstein, *The Weekly Standard,* May 30, 2011 (http://www.weeklystandard.com/articles/fat-city_567621.html) and "Crossfire in Fat City: An exchange," by Daniel Halper, *The Weekly Standard,* June 3, 2011. (http://www.weeklystandard.com/blogs/crossfire-fat-city_573227.html).

[4] "How to measure the learning experience at the University of Texas," William Powers Jr., *Austin American Statesman*, June 7, 2011.

[5] "Onetime UT Dean John Silber reflects on issues past and present", *Austin American Statesman,* April 16, 2011.