

# **“I think UT Dallas may be (to the UT system) what UCLA is to Berkeley today”**

**-Dr. William Cunningham  
Chancellor, UT System<sup>1</sup>**

## **THE UNIVERSITY OF TEXAS AT DALLAS**

The provisional faculty workload goals, proposed for UT Dallas, in the memorandum of August 21, 1998 are the consequence of an interaction between the classification system used and the unique characteristics focus and profile of the university. In the sections below, we examine both the university’s profile and the Carnegie Classification system as we develop an explanation for the workload profile at UT Dallas. It may be that the use of the Carnegie Classification may have policy effects that are not desirable for the people of Texas.

The mission of The University of Texas at Dallas is to provide Texas and the nation with the benefits of educational and research programs of the highest quality which address the multidimensional needs of a dynamic modern society driven by the development, diffusion, understanding and management of advanced technology. Within this context, one goal of UT Dallas is to provide able, ambitious students with a high-quality, cost-effective education that combines the nurturing environment of liberal arts college with the intellectual rigor and depth of a major research university. The university emphasizes research and education in science and technology while maintaining relevant, concurrent programs of focused excellence in other areas.

UT Dallas began as a graduate, research institution focused on the sciences and technology. Until 1990, it was an upper division, graduate institution with a decided research focus. In 1990, by an act of the Texas Legislature, the university was permitted to admit lower division students under selective criteria. There are several consequences stemming from the university’s unique history and focused mission. The first is its enrollment profile. The second is the university’s degree and course profile. A third is its focus on the sciences, engineering, computer sciences and management, and the competition nationally for faculty talent in these fields. Each of these consequences is examined below and each bears upon the provisional workload goals for UT Dallas.

## **The Enrollment Profile of UT Dallas**

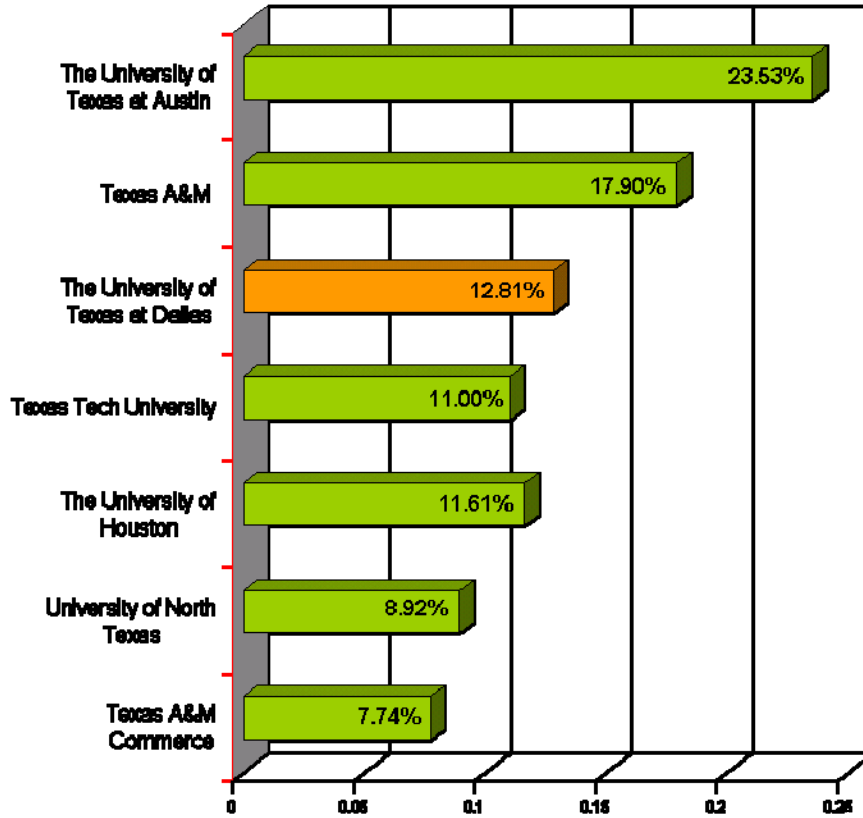
First, its enrollment profile does not conform to the conventional enrollment pyramid where the freshman class is the most numerous and doctoral students are the least numerous classification. Texas Tech typifies this pattern. UT Dallas appears quite differently. Its lower division comprises just 15 percent of the total student body while graduate post-baccalaureate, masters and doctoral students comprise 43 percent of its student body. Chart 1 compares public state Ph.D. granting universities in terms of their full time graduate students. As can be seen, UT Dallas ranks third in the state behind UT Austin and Texas A&M (Carnegie Research I universities) but ahead of Texas Tech and The University of Houston (Carnegie Research II universities). Indeed, for example, UT Dallas’ full time graduate student to total student profile ranks it above that of SUNY Stony Brook, the University of Georgia, the University of Kansas, LSU and the University of Massachusetts at Amherst all of which are Carnegie Research I institutions.<sup>2</sup>

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<sup>1</sup> As quoted in the UTD Mercury, Vol. 19, no. 2, September 2, 1998, p.1.

<sup>2</sup> Based on data taken from Harold R. Doughty, Guide to American Graduate Schools, 8<sup>th</sup> edition (Penguin, 1997) and Peterson’s Guide to Four Year Colleges 1998.

Chart 1  
 Full-time Graduate Students at Public State Ph.D. Granting Universities



### Degree and Course Profile

A second consequence can be seen in the university's degree and course profile. Chart 2 compares the Ratio of Doctoral Programs to Baccalaureate Programs at Public State Ph.D. Granting Universities. As can be seen, UT Dallas at 0.77 ranks second in the state among Ph.D. granting public universities. Only UT Austin ranks above UT Dallas. Chart 3 provides a comparison of graduate courses authorized expressed as a percentage of total authorized courses for the same set of universities. As a percentage of its total authorized courses, the number of graduate authorized courses place UT Dallas first in the state with Texas A&M and UT Austin ranking second and third respectively. A similar result can be found in Chart 4 which compares the ratio of courses organized to total courses for the Fall 1997 semester. Slightly less than half of the organized courses at UT Dallas are considered graduate according to the Texas Higher Education Coordinating Board. UT Austin at 0.41 is second in the state and Texas A&M ranks third.

Chart 2  
Ratio of Doctoral Programs to Baccalaureate Programs at Public State  
Ph.D. Granting Universities Fall 1997

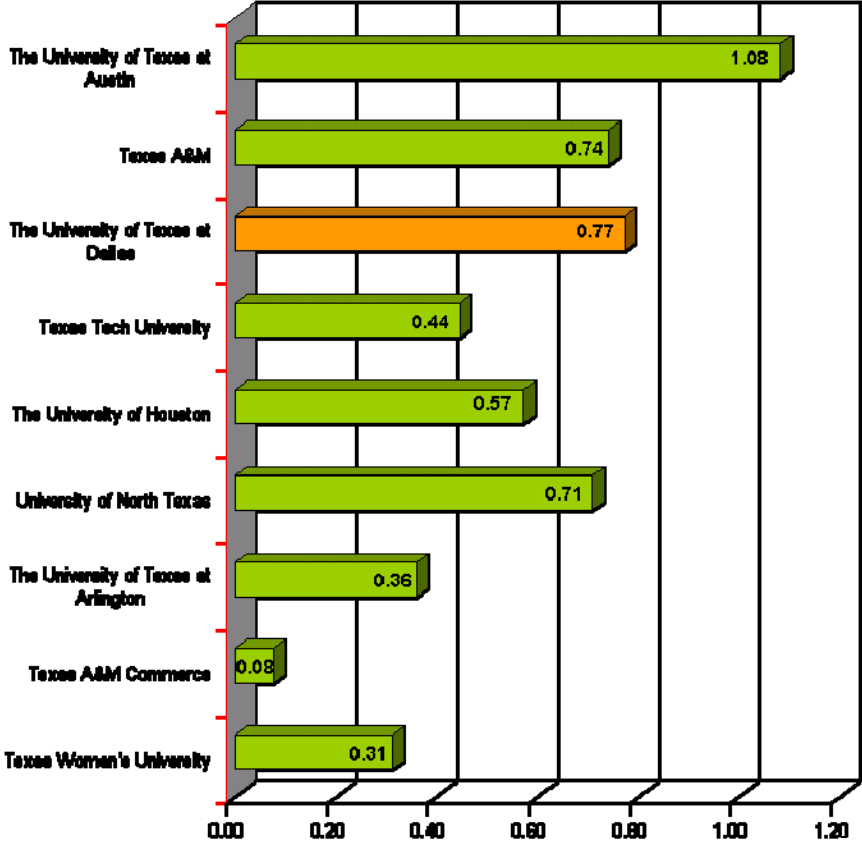


Chart 3  
Graduate Courses Authorized Expressed as a Percentage of Total Authorized Courses at  
Public State Ph.D. Granting Universities Fall 1997

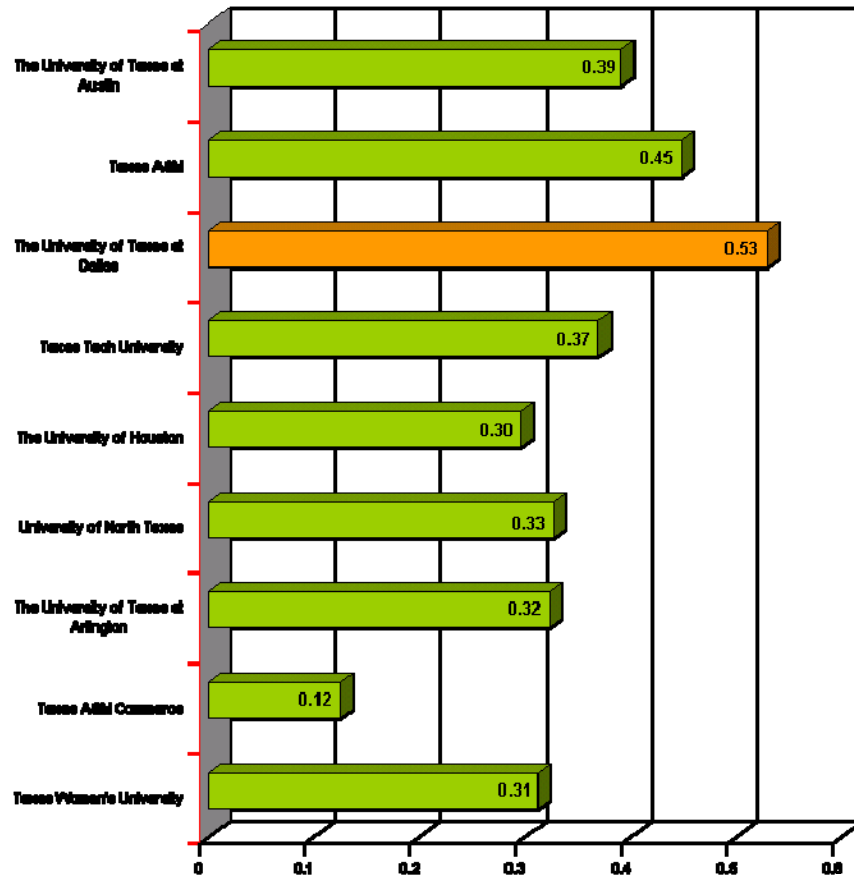
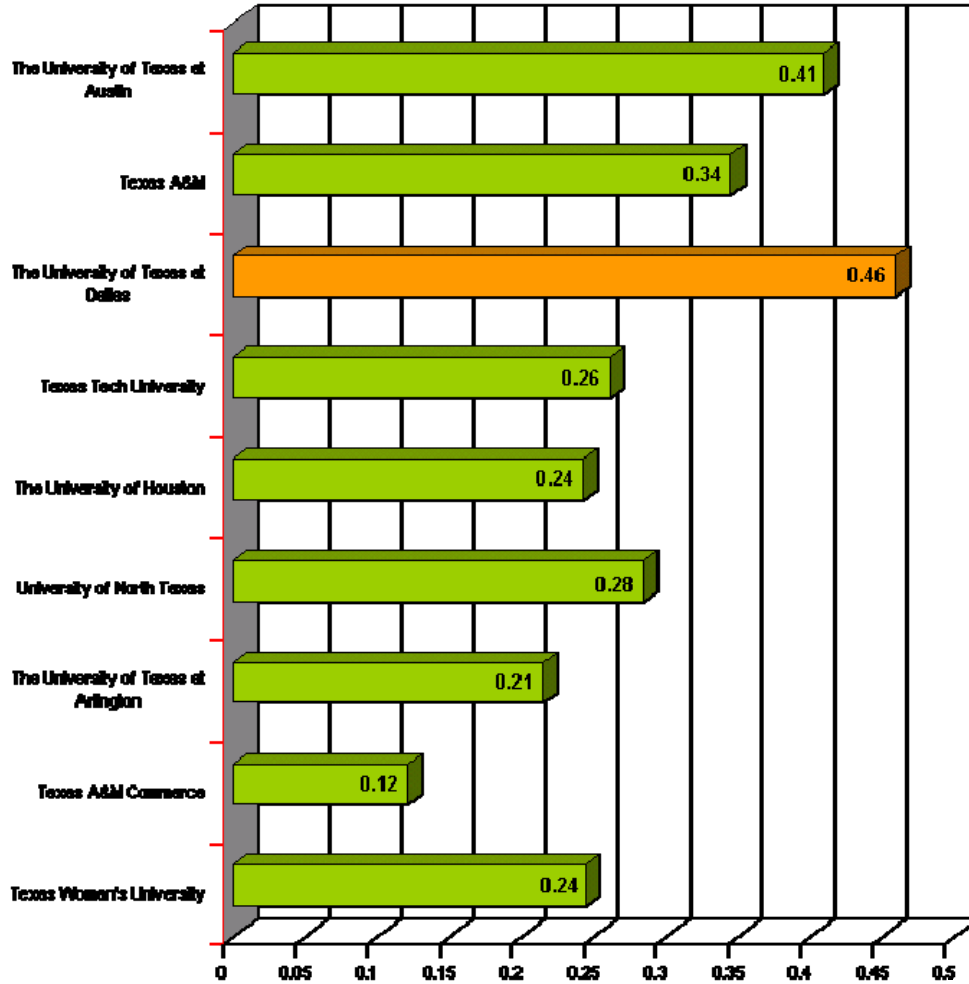
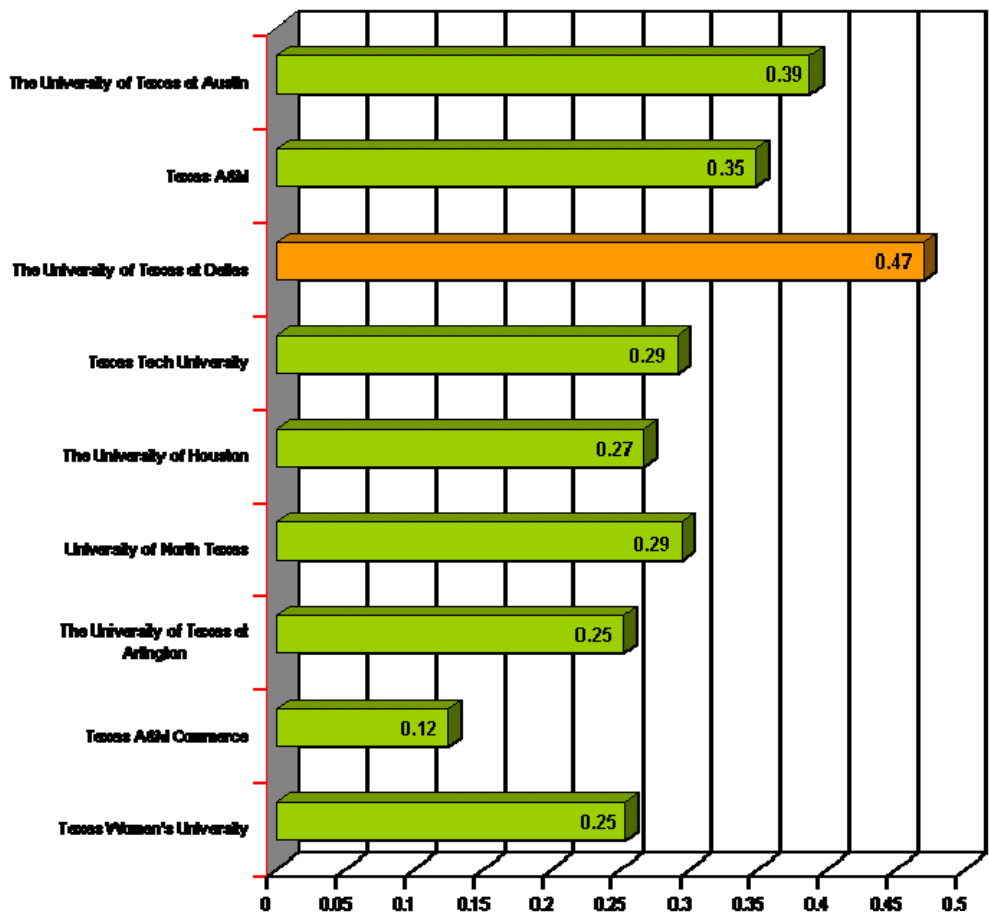


Chart 4  
 Graduate Courses Organized Expressed as a Percentage of Total Authorized Courses at  
 Public State Ph.D. Granting Universities Fall 1997



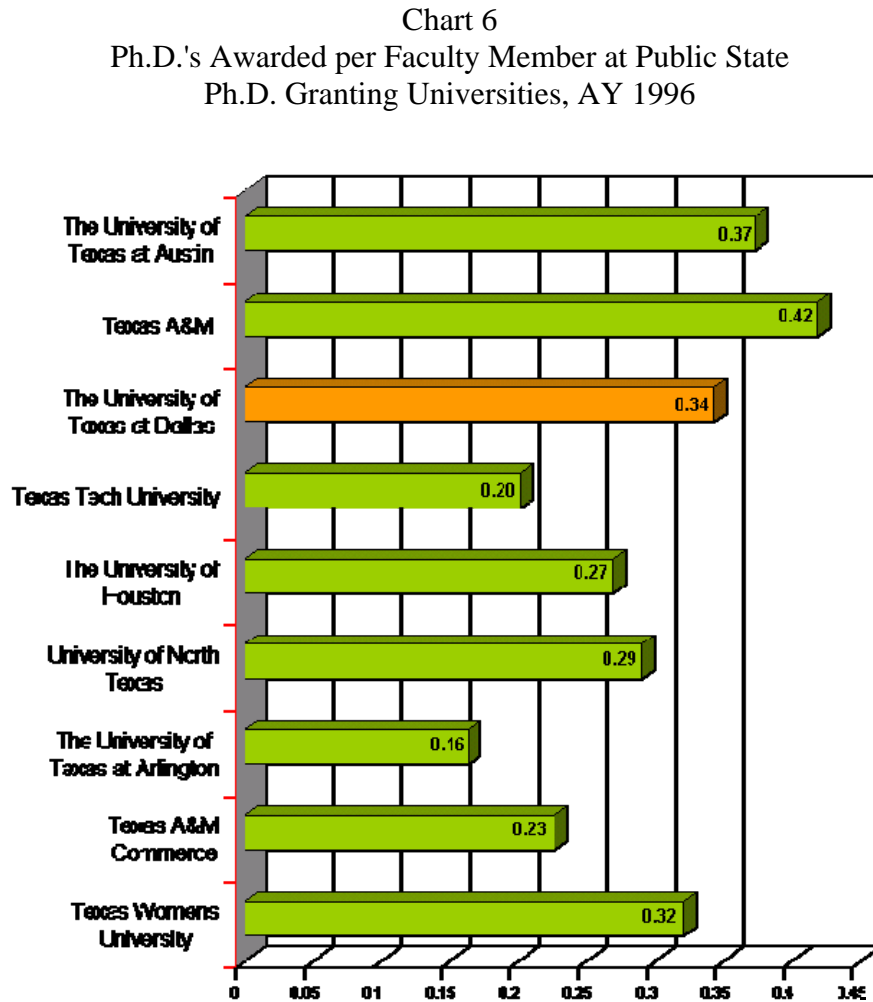
A comparison of courses actually taught in the fall semester 1997 is more revealing and speaks directly to the issue of faculty workload; Chart 5 provides the comparison. As can be seen, UT Dallas at 0.47 ranks first in the state ahead of both Research I and both Research II schools. Ostensibly, the Carnegie System uses two variables, not directly measuring instruction, to classify institutions. As noted above the actual array of programs and organized courses at UT Dallas more closely models Research I institutions than other institutional categories.

Chart 5  
Graduate Courses Taught Expressed as a Percentage of Total Authorized Courses at  
Public State Ph.D. Granting Universities Fall 1997



## Ph.D. Production and Federal Research Dollars

The two published categories of the Carnegie system focus on Ph.D. production and federal research dollars generated. Charts 6 and 7 examine these variables for state public Ph.D. granting institutions.



As can be seen in Chart 6, UT Dallas ranks third in the state in Ph.D. production per faculty member. This is especially significant given that the university does not have a comprehensive doctoral profile (for example, it does not offer doctorates in education, in individual social science or humanities disciplines). The relative Ph.D. production for UT Dallas ranks it ahead of many Research I institutions, including LSU, SUNY-Stony Brook, Georgia, Tennessee and Kansas.

Chart 7  
 Federal Research Dollars per Faculty Member at Public State  
 Ph.D. Granting Universities, FY 1997

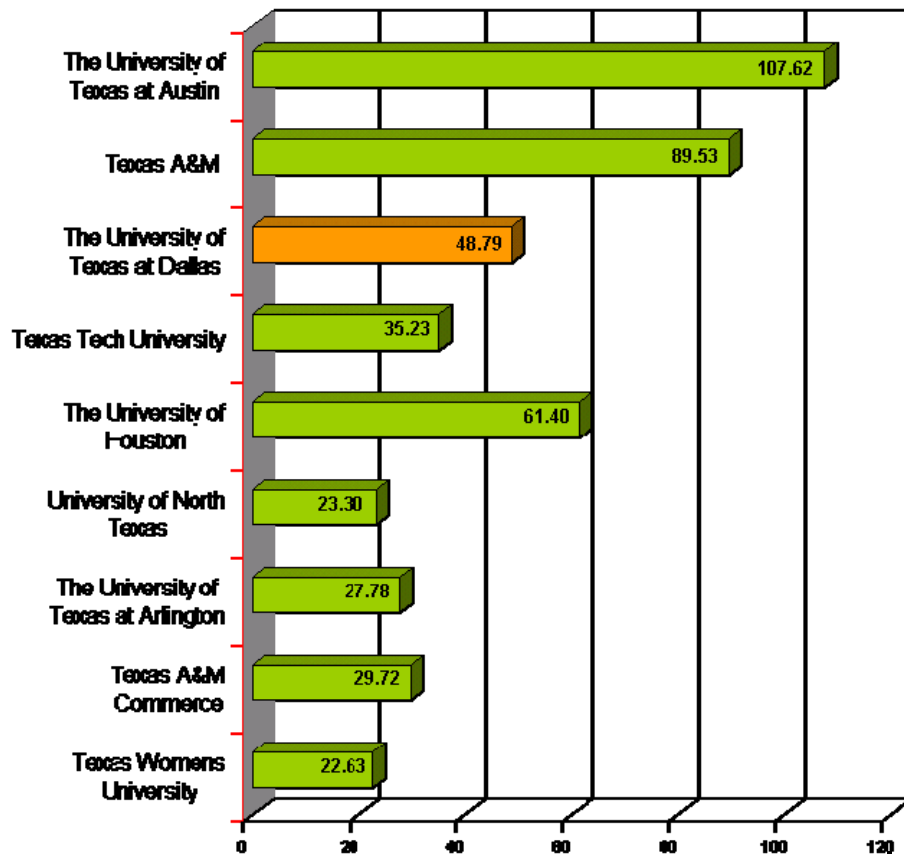


Chart 7 compares average research dollars per faculty member at state public Ph.D. granting universities. UT Dallas ranks fourth in externally generated federal research dollars behind UT Austin, Texas A&M, and The University of Houston, and well ahead of all other Ph.D. granting institutions. When the two variables—Ph.D. production and research dollars per faculty—are taken together the pattern in Figure I emerges. This two-dimensional view demonstrates the university’s position relative to the other institutions.

### **The Focus of UT Dallas on Engineering, Computer Science, Management and the Sciences**

In the past several years, UT Dallas has focused its faculty hiring for national talent in its areas of focused excellence. Like UT Austin and Texas A&M, one result of this is the need to compete against other nationally respected institutions offering attractive teaching-research packages to prospective faculty. UT Dallas has been quite fortunate in attracting and retaining the type of faculty that best serves the educational and economic interests of its service area and best fits its mission. Again, UT Dallas does not have a broad array of undergraduate programs nor the large undergraduate population to diversify its class load. Over the

three-year period represented in the data on tenured and tenure-track class load, the class loads at UT Austin and Texas A&M gradually declined. The class load at UT Dallas also declined as the university focused its hiring in engineering and management.

The class load data is consistent with the data presented in the Chart and Figures above and with national institutional ranking by recognized media. For example, the current US News and World Report rankings place UT Dallas as the third best public university in the state behind UT Austin and Texas A&M. Kiplinger's ranked all public universities to come up with the top 100 state schools. Only three schools from Texas made the list: UT Austin, Texas A&M and UT Dallas.

**UT Dallas, if it was the size of UT Austin or Texas A&M, would be a Research I institution.** UT Dallas, like Rockefeller University, is the exception that probes the rule, a point that is examined below.

## The Carnegie Classification of Institutions of Higher Education

The Carnegie Commission's classification scheme for institutions of higher education was originally published in 1973 based on 1970 data with minor updates in 1976.<sup>3</sup> The original criteria for classifying doctoral granting institutions were designed to set apart institutions based ostensibly on two criteria: federal funding of academic science and Ph.D. production. The classification was not designed nor intended for use as a means of making policy.

The category, Research University I, was supposed to designate only the top 50 universities given these criteria. Yet when the original list was published it included fifty-one institutions. Ironically, the Commission violated its own criteria and added Rockefeller University even though it did not meet the criteria.<sup>4</sup> Clearly even then, flaws with the classification system were apparent. Since then, the number of Research I institutions has grown from the original 51 to 89 (a 74.5% increase) and Rockefeller is still included always with an asterisk to denote that it is treated as a Research I institution even if it still does not meet the criteria.

Similarly, Research Universities II were to be universities on the list of the 100 leading institutions in terms of federal financial support and have awarded at least 50 Ph.D.'s. Here too, the Commission violated its own criteria and decided to include institutions that did not meet the criteria, but that, they believed, had high quality graduate programs and "impressive promise for future development."<sup>5</sup> In 1976, this category had 47 institutions; the latest listing by the Chronicle of Higher Education contains 37 institutions.

There are two key points stemming from the Commission's actions. The first is that the Commission that created the classification system, and presumably understood it best, did not feel strictly bound to it. A two variable system cannot capture the mission specific attributes of all educational institutions. The second point is that the system was not and never could be a strictly two variable system, but is systematically biased in favor of large mega-campuses that were prototypical of the years in which the system was created. Chart 8 compares the average 1995 enrollment of doctoral granting institutions as classified by the Commission. It is apparent that even with the small Ivy League and richly endowed private institutions added in, Research I universities are larger than all others followed in a stair step pattern. The data are striking. What has actually driven many schools upward in the classification scheme is enrollment growth.

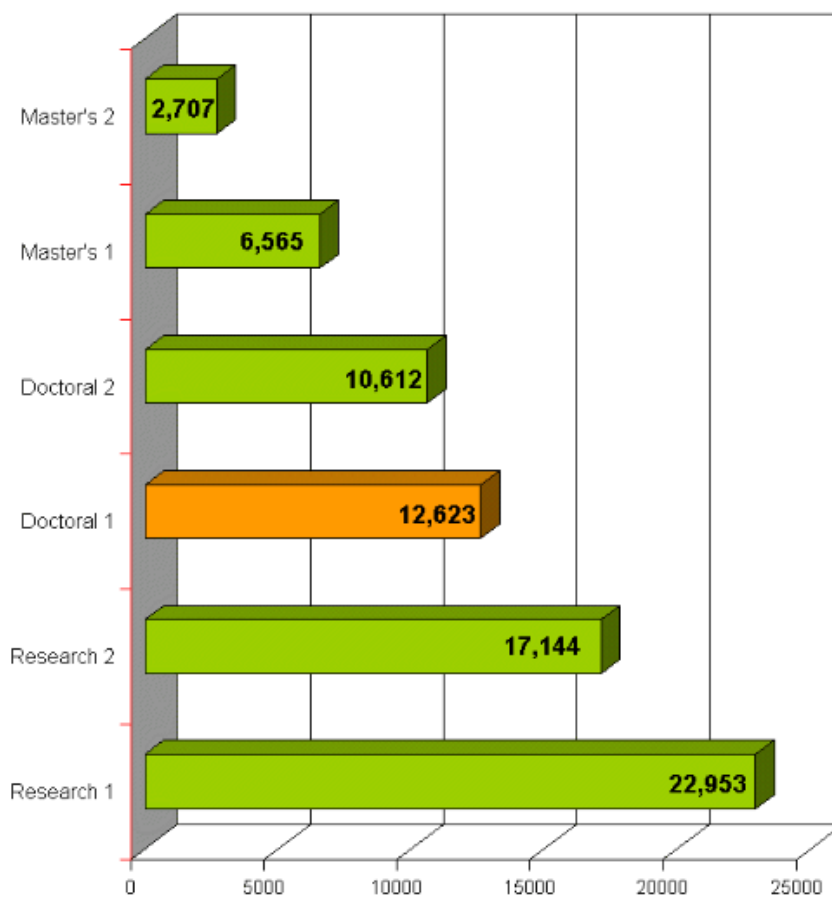
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<sup>3</sup> A Classification of institutions of higher Education, Revised Ed., Berkeley: Carnegie Council on Policy Studies in Higher Education, 1976: v.

<sup>4</sup> Rockefeller University is Still carried as a Research I with an "\*".

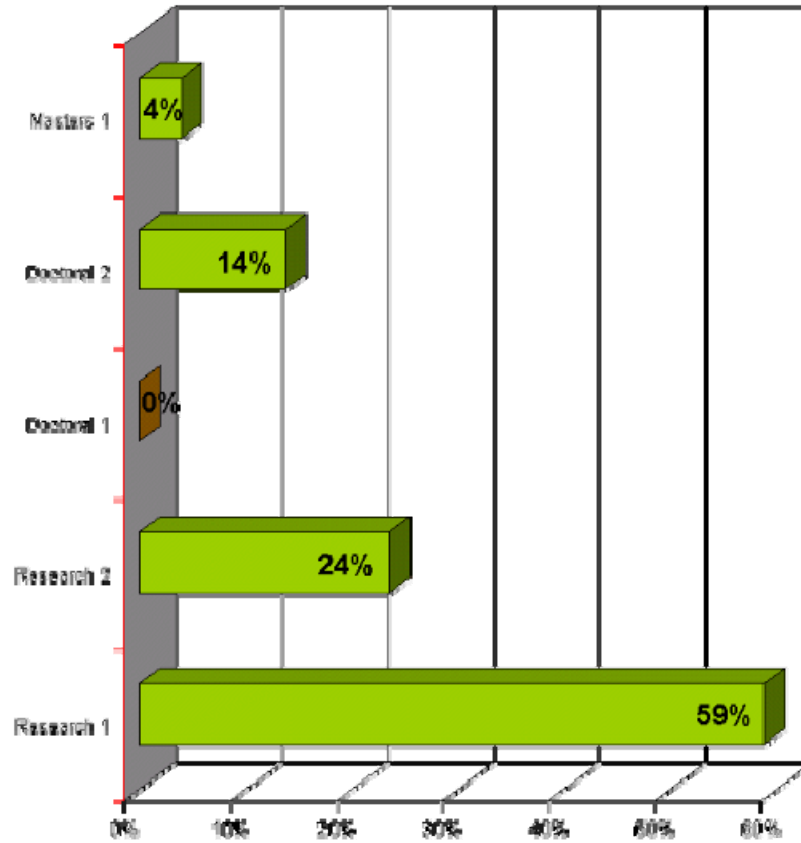
<sup>5</sup> Op.cit. xv.

Chart 8  
Average 1995 Enrollment of Doctoral Granting Institutions by Carnegie Classification



In addition to size, there are other variables operating underneath the ostensible two-variable classification. One of these is Land Grant status (see Chart 9). For the original state land grant schools, 42 of the 51 are either Research I or Research II. Of the nine land grant schools that are exceptions to this pattern, eight are in sparsely populated states (e.g., North Dakota). The ninth is located in the District of Columbia. Another example of an underlying variable that is structural in nature can be drawn from the University of Michigan at Ann Arbor, a peer school for UT Austin. The University of Michigan at Ann Arbor contains a medical school as part of its plant—a clear advantage for federal research dollars. Under the Carnegie scheme Ann Arbor is rewarded for a structural difference in the way the Michigan education system is organized and not necessarily a difference in performance.

Chart 9  
Land Grant Schools by Carnegie Classification



UT Dallas aspires to be a nationally prominent, tightly focused research university noted for its distinctive programs and students. To successfully compete for nationally prominent, research productive faculty, the university must offer similar employment packages to larger universities. As UT Dallas grows, it will be reclassified as Research II. However it will be difficult to sustain its phenomenal momentum if a workload constraint is put in place. A mission based criterion for workload policy is much more appropriate than a size-based criterion in a state as rich in diversity as Texas.