

## **Assessing Teaching Activities on an Academic Health Science Center Campus**

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### **Abstract:**

*Academic success at an academic health science center campus is often measured by research funding and revenue generated from clinical practice. Efforts that provide financial support to sustain and improve the campus are highly valued and easier to weight during deliberations about a faculty member's promotion and tenure. In contrast, the activities of teaching that help to prepare the next generation of health care providers is typically not revenue-generating and is undervalued. The usual manner of demonstrating scholarship, through funded grants or published papers, is a less useful metric for evaluating the activities or scholarship of teaching. In this paper, we describe the factors that have led to an increased interest in recognizing and rewarding teaching at an academic health science center campus and the metrics that have been developed to evaluate teaching activities. We review the criteria that have been developed for evaluating faculty teaching performance in the College of Medicine and describe how these factors must be modified to meet the unique needs of another college at this academic health science center, the College of Dentistry. We conclude with a discussion of next steps to be undertaken.*

### **Key Words:**

Scholarship of teaching, assessment, health science center, promotion, tenure, medicine, dentistry.

### **Academic Health Science Centers and the Activity of Teaching**

Although teaching and preparing the next generation of health care professionals “is a core mission for all health science schools” (Fincher & Work, 2005), academic health science centers face unique challenges in addressing this central mission. First, institutions emphasize research activities and clinical care for their ability to generate revenue and garner prestige (Fincher & Work, 2005), supporting Kerr’s (1995) earlier contention that “Society hopes that professors will not neglect their teaching responsibilities but rewards them almost entirely for research and publications” (p. 9). Second, academic health science centers are often isolated from the core of programs and faculty dedicated to teaching that are present on undergraduate campuses. Additionally, most health science center faculty are hired based on their expertise in their discipline rather than on their teaching ability, and many have limited, if any, preparation for their roles as educators. Thus, in academic health science centers, there is often a mismatch between the pervasive belief “that all faculty have an obligation to teach well, to engage students, and to foster important forms of student learning” (Hutchings & Shulman, 1999, ¶ 14) versus actual faculty commitment to, and comfort with, their roles as educators, a mismatch that can result in poor teaching and poor learning outcomes for students.

### **Local Context**

Similar to other academic health science centers, committees and administrators at The University of Tennessee Health Science Center (UTHSC) have experienced challenges when assessing faculty teaching activities for promotion or tenure. Recent events, including a renewed emphasis on teaching from the institution’s administrators, faculty, and student groups, laid a foundation for a new awareness and emphasis on the university’s teaching mission.

The mission of the UTHSC is to improve human health through education, research, clinical care, and public service. The UTHSC campus includes the six colleges of Allied Health Sciences, Dentistry, Graduate Health Sciences, Medicine, Nursing, and Pharmacy. In addition, faculty provide educational opportunities, patient care, professional education and research at campuses in Knoxville, Chattanooga and Nashville, and at numerous hospitals and clinical practice sites across Tennessee. The campus has 3,526 regular, term, and voluntary faculty, with 2,637 students (UTHSC, 2008). During the fiscal year ending June 2007, UTHSC faculty and staff received \$92 million in external funding for research and sponsored programs (UTHSC, 2008).

Like many other academic health science centers and research intensive institutions, there is the spoken mantra that “teaching is priority #1.” Overwhelmingly, though, faculty members perceive that they are more likely to be rewarded for their activities in the areas of research and patient care. Supporting the perception that rewards are greater for research contributions, UTHSC offers a substantial bonus to

researchers who offset a certain fraction of their salary with extramural funding (UTHSC, 2007) but has no parallel reward system for faculty whose primary responsibility is education. In addition, the criteria used for promotion and tenure have traditionally been weighted more heavily toward research, despite the stated importance of teaching as the 'highest priority' for our faculty.

The Health Science Center campus has undergone a major transition in leadership in the past three years. Budgetary constraints and the interests of past leadership had led to an emphasis on the clinical and research missions, often at the expense of the education mission. However, in the past three years, a confluence of events has served to redirect some of that energy and refocus it on a new awareness of, and emphasis on, the educational mission. Major factors in this change included 1) the hiring of a new chancellor with an interest in creating a promotion and tenure process that was transparent, equitable and quantifiable; 2) the hiring of a new vice chancellor for academic, faculty and student affairs with an appreciation for the educational mission; and 3) the involvement of medical students who were concerned about the caliber of their didactic experiences and who wanted to provide support for the educational enterprise.

The medical students planned a series of faculty development activities for educators and spearheaded the adoption of new educational technologies, including podcasting and advance organizers, to improve the educational experience. Ultimately, with the support of the new vice chancellor, the student initiative was broadened and a new campus-wide task force was created to develop strategies for enhancing the scholarship of teaching and learning and to create faculty evaluation systems that can document and reward educational excellence. This Education Faculty Development Task Force has worked to identify faculty needs and offer programs to address some of those needs; it has also spearheaded the establishment of a Faculty Resource Center that is beginning to develop a comprehensive approach for improving faculty teaching skills.

### **Valuing Teaching in the Promotion and Tenure Process**

The health science center, like many others, had a traditional tenure and promotion system that tended to reward faculty contributions in research and clinical care to a greater extent than contributions in education. Careful inspection revealed that the problem was three-fold. First, promotion guidelines were relatively broad such that there was considerable variability as to the types of documentation in faculty promotion dossiers and hence inconsistent evaluation of these dossiers at the individual, department and college level. As a result, what "counted" in one department or one college for promotion and tenure might not be counted or could be counted differently in another department or college. Second, promotion and tenure committees found it easier to assess faculty who had obtained extramural funding and who had published widely, or faculty who had extensive clinical activities; documentation of teaching contributions was often insufficient for an objective review of teaching activities and teaching scholarship. Third, committee members often based their assessment on unwritten standards as to the types of activities that should count for promotion, favoring the traditional criteria that are useful for evaluating the clinical and research missions.

The arrival of a new Chancellor at UTHSC led to a reassessment of the promotion process and a mandate to create a process that was transparent, that utilized a scorecard for assessing faculty performance and that established new minimum expectations for promotion in rank. In response to this new mandate, faculty and administration worked to develop appropriate benchmarks for all aspects of faculty work such that faculty could be evaluated and rewarded based on the full range of their academic accomplishments. The resulting process for evaluating faculty performance, developed and refined over the last three years, has come to be called the “metric system,” and is based on four major principles:

First, faculty and their chairs must agree annually on level of effort (as a rough percentage) that should be devoted to each of the four academic missions at UTHSC: Teaching, Research/Creative and Other Scholarly Activities, Patient Care, and University Service/Outreach. Faculty performance would then be evaluated accordingly. If, for example, a faculty member had spent 90% of his or her time and effort on teaching, the evaluation would need to take this weighting of effort into account. In practice this was accomplished using a system in which faculty scores for each mission were multiplied by the percent effort devoted to that mission. In our example, the faculty member’s points for teaching would be multiplied by 0.9 (reflective of percent/relative effort for that mission) and then added to remaining point totals to determine the total score for the evaluation period. Thus, the final score would be equal to [(relative effort Scholarly Activity) (points for Scholarly Activity) + (relative effort Patient Care) (points Patient Care) + (relative effort Teaching) (points Teaching) + (relative effort Service) (points Service)].

Second, benchmarks and criteria must be clearly defined for each of the four missions. For example, two benchmarks of teaching are (a) director of course, clerkship, residency, or fellowship training and (b) teaching awards.

Third, the point system needed to be simple and clear to minimize misuse and discrepancies between departments. The point scale we settled on had a range from 0-3 points for each benchmark, where 0 reflects no contribution in a particular area, 1 denotes minimal or unsatisfactory contributions, 2 indicates moderate or satisfactory contributions and 3 indicates exceptional contributions for that benchmark. Quality and quantity were both considered in determining a score. For example, for teaching in the category of Other Teaching Duties, a value of 1 is assigned if the individual refused to accept mentoring responsibilities consistent with department or division averages, a value of 2 is assigned if the person consistently mentored trainees, and a value of 3 is assigned if the faculty member mentored significantly greater numbers of trainees when compared with department or division averages.

Fourth, scores obtained using the metric system would be used as important criteria for promotion but would never be the sole determinant since there are many intangibles that are not easily measured. Individual colleges also reserved the right to establish additional specific criteria for rank and track.

With these fundamental principles in mind and using the formula presented above, guidelines were set as to the scores required for a faculty member to be considered for promotion:

- For promotion to Assistant Professor, the expectation is that a candidate would score a minimum of 3.5 points if he/she does not have a clinical practice and 4.0 points if he/she has practice responsibilities.
- For promotion to Associate Professor, the accumulation of a minimum of 6 points is required from new/continuing activities since appointment or last promotion.
- For promotion to Professor, the accumulation of a minimum of 7.5 points is required from new/continuing activities since appointment or last promotion.

**Refinement of the Metric in Assessing Teaching Activities:  
College of Medicine**

The teaching metric that was developed included four categories, of which three (and only three) were to be selected by the faculty member to reflect those most appropriate for use in evaluating his/her accomplishments. A maximum of 9 points (3 of the 4 categories with a maximum of 3 points each) were to be allocated for a faculty member’s efforts in the teaching mission. The score was to reflect both the effectiveness and the level of contribution in each category. Examples of activities to be considered in allocating points for teaching include

- Major teaching role such as a course director, residency coordinator, director of departmental/college graduate program
- Service as lecturer/clinical mentor/research mentor/member of thesis or research oversight committee, student advising
- Acknowledged excellence in teaching as evidenced by excellent student and/or peer evaluations, teaching awards, awards to graduate students or fellows who were mentored by the faculty member, excellent outcomes on national board exams following specific faculty interventions such as the creation of practice exams or delivery of preparatory sessions
- Innovation in education, such as major course revisions, curriculum redesign, or introduction of technology in the instructional setting.

The metrics adopted in the College of Medicine for assessing teaching activities are best understood when the points with accompanying benchmarks are defined. As such, Table 1 provides details of the points and specific benchmarks used in the metrics for evaluating teaching activities in the College of Medicine.

**Table 1: Initial Teaching Metrics Developed for the UTHSC College of Medicine**

**A. Teaching Director**

1 (Below Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
<p>_____ did a below average job as Director of Course, Clerkship, Residency or Fellowship training</p>	<p>_____ did a good job as Director of Course, Clerkship, Residency or Fellowship training</p> <p>_____ was Associate Director of Course, Clerkship, Residency or Fellowship</p>	<p>_____ did an exceptional job as Director of Course, Clerkship, Residency or Fellowship training</p> <p>_____ maintained more than 1 Directorships of Course, Clerkship, Residency or Fellowship training</p>

**B. Other Teaching Duties**

1 (Below Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
<ul style="list-style-type: none"> <li><input type="checkbox"/> refused to assume additional lecture hours or clerkship/GME responsibilities yet below the department/division average in lecture hours</li> <li><input type="checkbox"/> refused to accept mentoring responsibilities as is consistent with department/division averages</li> <li><input type="checkbox"/> failed to appear at scheduled teaching / mentoring obligations</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> number of lecture hours or clerkship/GME efforts were consistent with average of the same of comparable department/division</li> <li><input type="checkbox"/> consistently mentored trainees</li> <li><input type="checkbox"/> served on thesis or research oversight committees</li> <li><input type="checkbox"/> current or past trainees have done well / progressed appropriately</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> lecture hours or clerkship/GME efforts were &gt;25% above the average of the same or comparable department /division</li> <li><input type="checkbox"/> number of mentored trainees was significantly greater than the faculty average for the same of comparable department/division</li> <li><input type="checkbox"/> served on multiple thesis committees beyond that of a typical faculty member</li> <li><input type="checkbox"/> current/past students or trainees have excelled and/or received faculty positions or awards</li> </ul>

**C. Acknowledged Excellence in Teaching**

1 (Below Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
<ul style="list-style-type: none"> <li><input type="checkbox"/> consistently received poor reviews in evaluations</li> <li><input type="checkbox"/> consistently received poor reviews from Director of teaching/training program</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> student/trainee evaluations note a job well done</li> <li><input type="checkbox"/> consensus among Faculty and Director of teaching program of a job well done</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> received multiple teaching awards</li> <li><input type="checkbox"/> consistently received outstanding student/trainee evaluations</li> <li><input type="checkbox"/> consistently received outstanding review by Director of program</li> </ul>

**D. Innovation in Teaching**

1 (Below Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
<ul style="list-style-type: none"> <li><input type="checkbox"/> used out-of-date information</li> <li><input type="checkbox"/> material disorganized and presented in an uninteresting fashion</li> <li><input type="checkbox"/> lacked clear objectives in training/lectures</li> <li><input type="checkbox"/> ignored questions and requests for added help</li> <li><input type="checkbox"/> lectures were duplication of book or other single source</li> <li><input type="checkbox"/> exams were arbitrary in material tested</li> <li><input type="checkbox"/> (other, describe below)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> well organized and interesting presentations</li> <li><input type="checkbox"/> used appropriate multi-media technology</li> <li><input type="checkbox"/> assessed and updated materials at reasonable intervals</li> <li><input type="checkbox"/> provided help / answered questions in a professional fashion</li> <li><input type="checkbox"/> objectives were stated and adhered to</li> <li><input type="checkbox"/> gave handouts and/or online access to materials from lectures, i.e. graphs, images, or bullet points</li> <li><input type="checkbox"/> exams tested the objectives and material presented</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> developed &amp; implemented curriculum for new course or clinical rotation</li> <li><input type="checkbox"/> annually upgraded material based on board scores, standards set by professional organizations, emerging concepts</li> <li><input type="checkbox"/> created student, residency or fellowship manuals for standard practice in division or department</li> <li><input type="checkbox"/> introduced novel and useful teaching tool(s) that require significant effort by faculty, i.e. DVD or web based tutorial</li> <li><input type="checkbox"/> developed simulations or standardized patients &amp;/ or implemented their use</li> <li><input type="checkbox"/> consistently sought out trainees that were struggling &amp; provided additional instruction</li> <li><input type="checkbox"/> published or presented at national meeting on innovative teaching</li> <li><input type="checkbox"/> (other, describe below)</li> </ul>

It is not uncommon for faculty to meet benchmarks that are a mix of “2” and “3” point values within a given subcategory. In that case, the point value with descriptive benchmarks that most closely describe the faculty member’s accomplishments is the assigned point value for that subcategory.

### **Consideration of the Metrics across Campus: College of Dentistry**

A faculty evaluation system that evaluates and rewards teaching activities, related to course leadership, teaching duties, excellence, or innovations, must be tailored to specific disciplines, and must also recognize that certain disciplines, particularly in the health sciences, deviate significantly from the lecture/laboratory teaching model. For this reason, the specific criteria that the College of Dentistry will use to evaluate faculty under the campus metric system is still under development. In developing these criteria, the college must take into consideration the specific characteristics of its faculty, the teaching challenges confronting them, and the opportunities (or lack thereof) for the faculty to engage a full complement of teaching activities.

At UTHSC, as at most dental schools in the United States, during the last two years of the four year dental curriculum, which culminates in the Doctor of Dental Surgery (D.D.S.) degree, the majority of student and faculty time is spent in the clinic where students diagnose and treat patients (e.g., perform dental surgery) under faculty supervision. The teaching environment is primarily structured around one-to-one faculty-student interaction that is tailored to the treatment needs of a specific patient. Thus, the opportunities for leadership and innovations in teaching that are available to clinical faculty in dentistry, and the evaluation of that teaching, are vastly different from the opportunities that are provided a course director in large, principally didactic courses. Hand (2006) describes the typical dental faculty as “clinical scholars,” and in reality, the emphasis is on “clinical,” rather than “scholar.” Additionally, more than one-half of new dental faculty members come from private dental practice (Chmar et al., 2008). Thus, many highly skilled dental clinicians may not have a background in teaching. A survey of one dental school found that 62% of full-time clinical faculty had no publications (Oakley & Vieira, 2008).

However, Hand (2006, pp. 942-943) lists several teaching "competencies" for the typical "clinical scholar" dental faculty. These activities in the area of clinical instruction may provide many dental faculty members with opportunities to engage in innovative teaching activities and course leadership that would be appropriate for incorporation into a metric for evaluating the teaching activities of clinical dental faculty. Some of these competencies include

- Model appropriate practices, attitudes, interpersonal skills, and ethical behavior in the delivery of patient centered care
- Teach decision-making skills, provide decision-making experiences, and guide students to correct decisions
- Demonstrate appropriate technical skills
- Identify sources of student difficulty and develop strategies to address appropriately (remediate)

- Facilitate the development of critical thinking skills through appropriate questioning strategies
- Integrate basic biomedical and clinical science principles into patient care
- Assess students' performance using valid criteria and standardized methods
- Conduct and analyze calibration exercises.

In sum, any assessment of the teaching activities of clinical dental faculty must take into account the unique environment in which these faculty teach, the challenges of limited time and resources under which many of these faculty labor, and the opportunities provided by the clinical teaching environment for teaching activities. Recognizing these distinctions, faculty and administration in Dentistry are working to adapt the new campus metric system to provide an appropriate tool for evaluating and rewarding the contributions of dental faculty.

### Discussion

When faculty members perceive that they must choose between research and/or clinical activities that are more readily countable and visible than teaching activities, the educational mission of an institution suffers. It is critical, therefore, that the profile and respect for teaching become more highly valued. At UTHSC, this has started with a change in the faculty promotion and tenure process so that quality teaching is valued as highly as quality research or quality patient care.

The university has taken an important step in clearly identifying criteria for judging teaching activities that are quantifiable and comparable across departments and colleges on our campus. These criteria assist faculty members to proactively determine teaching efforts that will be most useful to them in their promotion and tenure efforts. The explication of these criteria similarly facilitate the work of department and college Promotion and Tenure Committees as they strive for consistency and transparency in their deliberations and judgments of faculty members' teaching activities.

In the brief time since the metric system was developed – it was used in draft format for the 2007-2008 promotion cycle and required for use in the 2008-2009 promotion cycle – it has served to promote discussion in various campus venues about the education mission and the importance of demonstrating scholarship in teaching. These discussions, among faculty and within meetings, have increased the visibility accorded to teaching efforts. This serendipitous occurrence has prepared our campus for faculty development initiatives related to teaching.

Not addressed here, and an area that requires further development on our campus, is the additional work to strengthen the portion of the metric system that relates to Research/Creative and Other Scholarly Activities. Boyer's (1990) broad view of scholarship as discovery, integration, application, and teaching has been a useful adjunct in discussions focused on assigning value to teaching scholarship. Shulman's (1998) criteria that an activity designated as scholarship "should manifest at least three key characteristics: It should be public, susceptible to critical review and evaluation, and accessible for exchange and use by other members of one's scholarly community" (p. 5) has been useful as we continue to move forward with clarifying examples of teaching scholarship.



To that end, the campus plans a series of workshops on the scholarship of teaching and on practical methods whereby faculty can disseminate their teaching materials/approaches in the public domain. There are also efforts to document teaching excellence using peer review as an essential adjunct to student course ratings. Through these efforts, there may be a real opportunity to restore teaching as a major valued activity and enhance the educational experience of students.

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