

FACULTY WORKLOAD

**Warren R. Hill, Dean
Weber State University**

Abstract

This paper examines some of the concerns involved with faculty workload and raises issues dealing with both how to measure what faculty are currently doing as well as attempting to determine what faculty should be doing. The issues involved are multifaceted and complex and this paper seeks to look at them from several different aspects.

I. Why the Increased Emphasis on Faculty Workload?

There are a number of reasons why there is an increased emphasis how faculty spend their time. This section examines several of these reasons and attempts to provide a background and basis for why it is important for those of us who are administrators to look carefully at both what faculty do and how they do it. Perhaps the overriding reason why faculty workload has come to fore is that many institutions are now and have been for some time facing significant fiscal constraints. This in turn has prompted many people including legislators (for public institutions), boards of regents, boards of trustees, high level administrators and others to ask, "Are faculty operating as efficiently as they could or should?"

Part of the question of efficiency is due to the surge in costs at most higher education institutions. To document but a few of the cost increases, in the twelve year period from 1980 to 1992, professional salaries have gone up 102%, fringe benefits have increased 167% and the cost of library acquisitions have risen by 138%.⁵ To offset some of these increases, resident undergraduate tuition in just the five year period from 1991 to 1995 in public colleges and universities has increased an average of 40%.³ Comparing the increase in state spending for higher education across the country for roughly that same period (1990 to 1993) showed an increase of only 1%.⁴ Increased costs coupled with little or no increases in fiscal support have placed significant restraints on many institutions.

Another reason for the emphasis on workload is in anticipation of the apparent glut of upcoming students. This increase is being driven in part by the recognition of the economic value of a college education at any level, associate, bachelor or graduate. There are also increasing numbers of non-traditional learners coming back to school or going to school for the first time in order to upgrade their skills or to obtain a degree (or another degree). For example, the number of high school graduates is expected to increase 30% from 1992 to 2008.⁵ It is further anticipated that because of the economic factors associated with a college degree, high school graduates' rate of attending will likely increase. Higher education's ability to handle this huge influx of students given the continued paucity of resources calls into question our reliance on "business as usual."

Technology is another critical factor that has caused a review of how faculty use their time. With faculty teaching courses via videotapes, live television and now even more widely than either of those, via the World Wide Web, what does the concept of contact hours mean? These alternative delivery approaches have greatly broadened how faculty interact with students. In addition, these methods have led to increased competition from private providers, which further heightens the issue of costs.

In addition to the external factors listed above, there are also some internal factors that affect faculty workload. One is the emphasis on research, particularly in larger institutions, which causes faculty to move away from student-oriented activities such as advising, student development and use of active learning.² Another factor, which has driven costs up, is that institutions have traditionally spent all they could. The cost of educating a student depended on how much money was available, not necessarily the costs of producing an educated student. Finally it is also claimed that sabbaticals, administrative leave and tenure have also increased costs. Of these, tenure in particular is blamed because it has come to mean lifetime employment where tenured faculty become a permanent part of the institution's payroll.⁵ In 1996, 57.6% of all faculty in higher education institutions were tenured.⁸

Other factors imply a certain lack of efficiency on the part of higher education institutions, particularly in the eyes of the public. These include increasing time to degree completion where at present only 68% of entering freshmen graduate with a bachelor's degree in six years or less. While external factors such as part-time students and working adults have also had an effect on this statistic, internal factors are also to blame. One of the internal factors of public concern is the increasing amount of remediation. The public is asking why as taxpayers they have to pay twice for the same education. There is also the issue of weeding out students, which goes contrary to the theory that all students can learn. In addition, it leaves many students with little or no hope of further education, students who in all likelihood could learn given a different teaching method or more time and help.

Finally there is the increasing recognition that neither student credit hours nor faculty contact hours measures much of anything except student seat time or the time spent directly with students by faculty. Certainly it is not a measure of the amount of time required by a faculty member to teach a certain course nor does it have much to do with how much a student learns from a certain course. It is really this last point, what students actually learn, which is the heart of the faculty workload issue. It appears that all of the factors described above come down to one thing - "universities and colleges must become more effective managers of resources and redeploy faculty and staff time to meet needs more efficiently at a higher level of quality. (As) most other resources are fixed, faculty and staff time is the only resource that can be changed significantly to improve performance. Time becomes our most important fungible resource."⁶

II. What Do Faculty Do?

It might be worthwhile to examine to various kinds of activities faculty engage in during the course of performing their duties. There is a fair amount of data which shows that whatever types of activities are involved in these duties, faculty spend a fair amount of time doing them. For example, a study done by the U.S. Department of Education in 1991⁷ using data from 1987

showed that faculty worked an average of 47 hours per week in public two-year schools up to 57 hours per week in public research universities. While this data is now somewhat old, there is little doubt that it is still fairly close to the number of hours faculty actually work. In general, faculty put in long hours during the regular academic year.

One way to characterize the work that faculty do is to look at their activities in terms of the usual categories of teaching, scholarship and service. In spite of many perceptions to the contrary, teaching embodies much more than just time spent in the classroom. It also consists of things such as lesson preparation, writing exams, quizzes and laboratory experiments, grading papers and assigning grades, setting up laboratories, assisting students outside of class with questions and problems directly related to the subject being taught, running laboratories, and supervising independent study. Normally the time required outside of class will generally far exceed the time in class for a given course.

In the scholarship area, there are the typical activities most commonly associated with the research universities such as writing grants, supervising graduate students, writing for publication and working on one's own research. These activities are also common in other kinds of institutions and in Engineering Technology programs, but to a lesser extent. Frequently there is a requirement for some type of scholarly activity, which often takes the form of either grant writing, presentations or publications. Other activities such as course development and curriculum revision may also be counted as scholarship.

Service is often considered to consist of two subgroups, service to the institution and service to the profession. Service to the institution usually is thought of in terms of things such as serving on committees and advising students but it could also be speaking at public gatherings about the institution and serving on external groups as a representative of the institution. Other activities that fall into this category include advising student organizations, administrative activities such as serving as department chair or program leader and overseeing coop placements or internships. Service to the profession typically consists of things such as being active in one or more professional organizations, serving as an accreditation visitor, consulting and other activities where you represent your profession rather than your institution.

III. How Should Faculty Workload be Measured?

Various proposals have been suggested as ways to account for the time faculty spend in their various activities. The use of credit hours or contact hours has serious limitations in assigning faculty workload and fails to account for the time spent in scholarly or service activities. Particularly pertinent to the use of credit hours as a measure of workload is the following quote. "Clearly the conclusion of virtually all studies from 1929 to 1959 was that neither credit hour, contact hour, student hours, or student contact hours were by themselves, or together, reliable indicators of faculty members' workloads. Despite the results of these studies, the convenient descriptive load of fifteen credit hours per week (with an average of two hours preparation and grading for each credit hour taught) has persisted throughout higher education...The use of the "credit hour" as a standard criterion for evaluation an individual's contribution to the work of his university is even less appropriate now than it was ten years ago and it was clearly inappropriate

then."¹⁰ Furthermore it is patently clear that the picture has not improved in the thirty years since the studies mentioned above.

One approach that has been suggested for accounting for faculty workloads was presented at the 1998 ASEE Annual Conference.¹ In this paper entitled "Quantifying Academic Faculty Workloads", the authors start with the assumption that all faculty work a forty-hour week. Time spent during this forty-hour week consists of time spent in teaching and teaching related activities, scholarly activities and service activities. Expressed as a formula, this becomes $TW = TT + CS + SR$ where TW is the total time spent per week in all activities, TT is the average time spent on teaching related activities, CS is the average time spent on scholarly activities and SR is the average time spent on service related activities. TT is the sum of the teaching time for all courses taught in a given term for each faculty member where the average time for each course is determined by the following formula

$$(1) T = CN \times TS \times [(0.5 + 0.5 AE/NS) + FE + UD - TM]$$

where

CN is the number of contact hours per week

TS is the type of section taught, lecture or lab

AE is the actual number of students in the class on the tenth day of the semester

NS is the normal size of the class

FE is the faculty experience component

UD is a uniqueness/difficulty factor

TM is a team teaching factor

What the authors have done is to then assign numbers to these factors except for CN which is determined by the course itself. TS is 3 for a lecture section and 2 for a lab section. The 0.5 constant and 0.5 multiplier attempt to account for a division between that which is enrollment dependent and that which is enrollment independent. NS for the department for which this work was done ranges from 25 for lecture sections to 12 for laboratory sections. The faculty experience factor, FE, ranges from +0.6 for the first time an instructor teaches a course to -0.2 for the second section of a course taught in the same semester. The uniqueness factor ranges from 0.0 for a course taught from a standard text up to +0.4 for a course where the instructor has to prepare at least 50% of the material. TM ranges from 0.0 for an individually taught course to 0.4 for a course with three or more instructors.

For a given faculty member, TT is then the sum of all of the T s for each course taught plus the following factors as described by the following formula

$$(2) TT = T(1) + T(2) + \dots + T(n) + HS + AA + IT + FM - TA$$

where

$T(n)$ is the time spent on each individual course as determined by the first formula

HS is the time spent helping students with their course work

AA is the time spent per week in academic advising

IT is the time per week for independent study or internship supervision
FM is the time spent serving as a mentor to a fellow faculty member
TA is the time saved because of having a teaching assistant

The authors have also assigned numerical factors to each of these. Thus $HS = 0.11 \times \text{sum of the } T(n)$ for all sections. AA was defined as the number of advisees/10. The time for internships was given by the number of internship students $\times 0.6$ while the time required by independent study was the number of independent study student credit hours $\times 0.5$. Time serving as a mentor was calculated to be $0.15 \times T$ for an inexperienced faculty member and $0.05 \times T$ for an experienced faculty member. TA was estimated to be 0.5 hours for each hour per week the teaching assistant works.

The authors of this paper are to be commended for attempting to account for how faculty spend their time. In addition the authors attempt to account for the time taken for scholarly activity and service by requiring "specific identification" of the activities and approval by the department chair with faculty input. While such an accounting certainly helps clarify what a faculty do with their time, it does not provide much guidance in suggesting what they should be doing or how they might be more productive in terms of improving student learning.

IV. Where Do We Go From Here?

There is little doubt that how faculty use their time in the future will have to change whether we want it to or not. Additionally, faculty as well as everyone else associated with the academic enterprise, including administrators, will have to become more efficient in what they do. In technical terms, efficiency is defined as the ratio of output to input, normally expressed as a percentage. Using this definition of efficiency means we have to define what we mean by both the input and the output. In terms of outputs, what does it mean to have a student graduate with a baccalaureate degree in engineering technology? At present at most institutions what it means is that a student has completed anywhere from 120 to 130 semester hours of certain courses with certain grades. It says next to nothing about what a student has learned or what they are able to do.

While there may be some correlation between credit hours (read seat time) and learning we have very little idea what it is and probably cannot provide good rationale as to why we use credit hours as a measure. Certainly to us as technologists, credit hours should be a very suspect measurement. Would it not be better to define our output as competencies at particular levels of mastery for all elements of a degree including the major courses, the support courses, the general education component and the electives? In other words, would it not be better to develop a measure of mastery rather than time on task?

Defining the outcomes we want for our students in terms of competencies has to be done in the context of the program or department agreeing collectively what the standards must be for students who expect to receive a degree from that program. Faculty accountability could then be based upon how many students achieve those outcomes. As Plater states, "Student success can be rewarded explicitly because the objective is student learning instead of faculty teaching."⁶ This

also places the emphasis on individual learning strategies for students and concentrates on learning styles rather than teaching styles.

On the input side, we have even less of a sense of what to measure. What is the return on investment of faculty time for a 120 credit hour bachelor's degree? While we know what the student paid to get such a degree, do we know what it actually costs? If we knew what such costs were, we might have one measure by which we could start to allocate faculty time.

We also need to look more closely at how students learn. There is general agreement that in a lecture, very little learning takes place. The lecture is primarily a mechanism for dissemination of content. It is what the student does with that content where learning occurs. What we need is to teach such that independent learning becomes the norm and students can proceed at their own pace. The teacher then becomes a facilitator and guide, not just a fountain of knowledge or the person who assigns grades based on a curve. This means a different approach to how faculty spend their time and what is expected of them.

Another thing faculty will have to do with their time is to become much more familiar with available technology. At Weber State University in the fall of 1998, we had 1,000 students enrolled in on-line courses out of a student body of approximately 14,000 students. It is estimated that between 80 and 90% of these 1,000 students were students who were already taking one or more classes on campus. This number will continue to grow particularly when more and more students who cannot come to campus start taking these courses. Faculty will have to become as comfortable and familiar with technologically delivered courses as they are with standard classroom delivered courses. How to manage these kinds of courses and their associated learning processes may be the greatest challenge faculty will face in the future. As administrators, we must invest in faculty development activities that help faculty with the inclusion of technology into the learning process.

Finally it has been suggested that faculty in the future will have to not only have expertise in their disciplines but will have to be knowledgeable about pedagogy as well. We now have the technology that will help us keep track of individual student performance such that instead of being the grader, the faculty member now becomes the evaluator of proficiency. It is quite possible that in time, courses as such will disappear and we will have individualized learning modules which students will complete at their own pace. Why should we expect all students to complete specific blocks of learning in 15 weeks? A defined set of these modules will then make up a specific degree where the student will complete each module by demonstrating competency at a clearly defined level. Competency in these modules could also be demonstrated via work experience or in other ways.

V. Summary

At present, faculty have few if any specific requirements on their time except to meet their classes and keep office hours. It is interesting that this enviable position is generally free from personal accountability for what should be the most important responsibility faculty have which is student learning. It has been suggested that in the future, faculty will have to set personal as well as group goals, where these goals will be directly related to the learning process. As administrators we will

need to provide the resources, particularly for faculty development, such that faculty will be able to meet these goals in a timely manner. At the same time, we will need to make students more responsible for their own learning by setting clear standards for degree completion and offering a variety of ways of meeting these standards. As has been suggested in *An American Imperative*,⁹ we will need "...define and publicly state (our) standards of entry and exit in terms of the knowledge, skills, and abilities you expect from both applicants and graduates, and to put in place measures to assure student and institutional attainment of those standards by a fixed date."

BIBLIOGRAPHY

1. Affleck, Stephen B., Marvin C. Gabert, Hans J. Kuhr and Donald J. Parks, *Quantifying Academic Faculty Workloads*, ASEE Annual Conference, 1998
2. Astin, Alexander W. 1993. *What Matters in College?* San Francisco: Jossey-Bass.
3. Breneman, David and Joni Finney. 1997. "The Changing Landscape: Higher Education Finance in the 1990s." In *Shaping the Future*. San Jose: California Higher Education Policy Center.
4. Gold, Steven D. 1995. *The Fiscal Crisis of the States*. Washington, D.C.: Georgetown Univ. Press.
5. Meyer, Katrina A. 1998 *Faculty Workload Studies: Perspectives, Needs, and Future Directions*. ASHE-ERIC Higher Education Report Volume 26, Number 1.
6. Plater, William M. May/June 1995. "Future Work: Faculty Time in the 21st Century." *Change* 27: 22-33.
7. U.S. Department of Education. 1991. *Profiles of Faculty in Higher Education Institutions, 1988*. Report No. NCES 91-389. Washington, D.C.: National Center for Education Statistics.
8. U.S. Department of Education. 1996. *Institutional Policies and Practices Regarding Faculty in Higher Education*. Report No. NCES 97-080. Washington, D.C.: National Center for Education Statistics. ED 402 858. 111 pp. MF-01; PC 05.
9. Wingspread Group on Higher Education. 1993. *An American Imperative: Higher Expectations for Higher Education*, Racine, WS, The Johnson Foundation
10. Yuker, Harold E. 1984 *Faculty Workload: Research, Theory, and Interpretation*. ASHE-ERIC Higher Education Report no. 10.

WARREN R. HILL

Warren R. Hill is Dean of the College of Applied Science and Technology and Professor of Electronics Engineering Technology at Weber State University in Ogden, Utah. Dr. Hill is a registered Professional Engineer in Colorado and worked fourteen years in industry before entering academia. He is the co-author of three patents, a member of ASEE and a senior member of IEEE. Dr. Hill received his B.S. and M.S. degrees in Electrical Engineering from the University of Nebraska and Wayne State University respectively and a Dr. of Engr. degree from the University of Detroit.