FACULTY WORKLOAD:
Assessing a Definition,
Its Relative Elements,
and Faculty Load Formulas

Volume 8, Number 1
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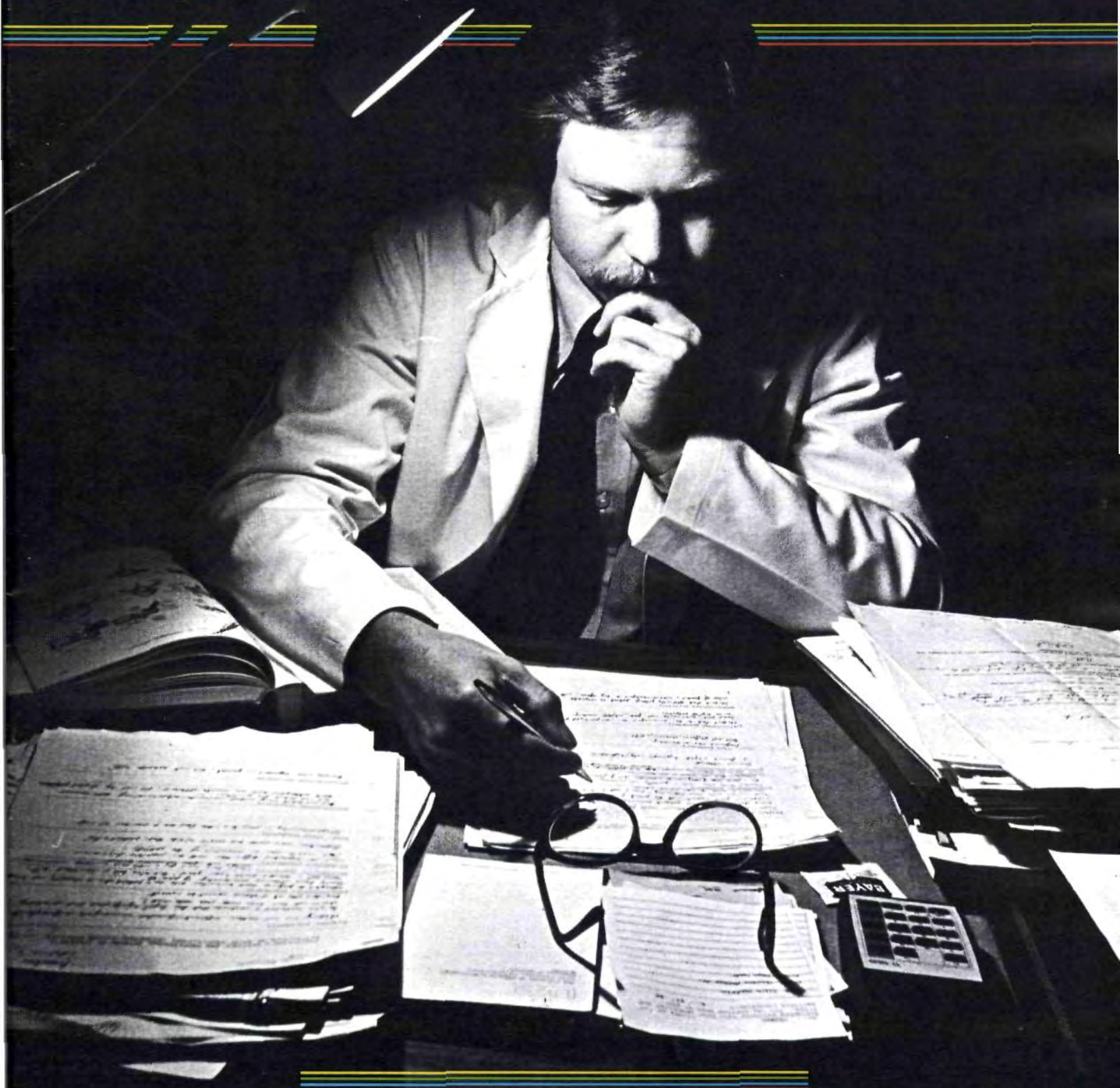
JOURNAL OF OPTOMETRIC EDUCATION



Also: ASCO's ANNUAL REPORT 1981-82

ASSOCIATION of SCHOOLS and COLLEGES of OPTOMETRY

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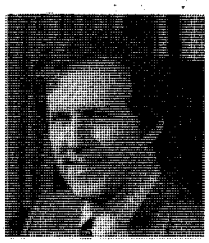

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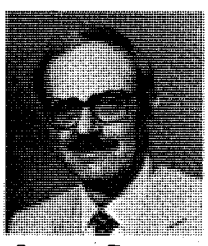

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EDITORIAL

Faculty Workloads in a Recessionary Economy

One could say that the fifteen years from 1963 to 1978 were the "golden" years in health professions education—what with repeated injections of federal funds in the form of construction grants, Health Professions Student Loans, College Work Study, research grants, basic (capitation) grants, special project grants, and even financial distress grants. Then, a funny thing happened on the way to the office: one by one, construction grants, special project grants, and financial distress grants were phased out; research grants were severely curtailed. Now, federal student loan programs have been curtailed and funds which are available can be obtained only at high interest rates. Even the College Work Study Program has been cut somewhat and threatened more. It was only a matter of time until most states were mirroring the federal squeeze.

One alternative to the "golden" view might be that those fund infusions were Trojan horse-like intravenous injections producing new "highs" of quality education, "excellent" research, and extensive public service programs with the addicting power of remarkable increases in salaries and fringe benefits.

Southern College of Optometry anticipated the possibility of hard times in 1977. In a faculty and staff planning conference, a resolution was presented and adopted which set out priorities for reduction of expenses if necessary to balance the budget in future years. At that time, the budget crunch was expected to result from a planned reduction of enrollment rather than from the demise of the golden goose and a general recession. Three years later, it became necessary to begin implementation.

During the 1980-81 fiscal year, the optical dispensary was put under outside management and moved off the main campus. This was partly because the dispensary was a deficit operation and partly for academic reasons.

During the same year, it was found that several vacant faculty positions would, if filled, result in a budget deficit on June 30, 1981, and would not be fundable the following year. As a result, these positions were frozen for the remainder of the year. A hiring freeze was imposed such that in the event of resignations, only critical positions would be filled.

The 1981-82 budget was prepared with little or no padding. The previously frozen vacant positions were eliminated. A limited hiring freeze was continued. In addition, the inflation factor which was applied to all salaries was limited to 4.81% as compared to a 9.69% increase which normally would have been applied following the Department of Labor CPI. That was the first year since the CPI-indexed salary schedule was established in 1969, that the college had been unable to "keep up with inflation."

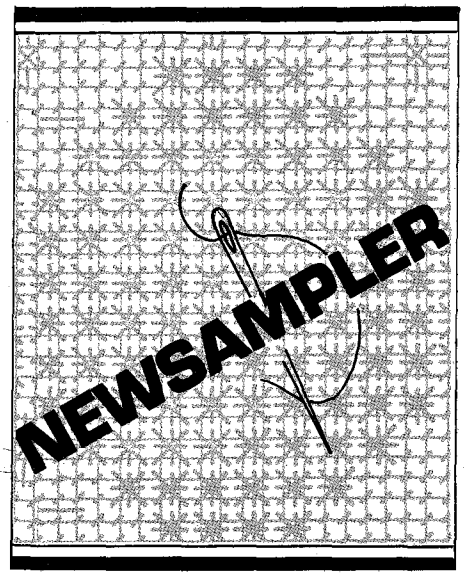
The 1982-83 budget was prepared even more severely. The SCO CPI was reduced by 1.67% rather than increased. Increments to an employee's salary index via rank, merit, and longevity were continued which did permit small raises for lower-salaried employees by offsetting the CPI reduction. Some higher salaried employees netted out to a decrease in salary. The overall effect was about 0.5% increase in salaries on the average as compared to about 8% the previous year and almost 18% the year before that.

The 1982-83 budget also eliminated any unfilled vacant positions that had resulted from resignations during the previous period. Of course, salaries were not the only expense items under restraint. Equipment budgets were severely curtailed and some plant improvements were deferred. Paid leave benefits were modified by reducing sick leave accrual from 1.25 days/month to 1.00 days/month and by reducing the maximum accrual of annual leave from 2 days/month to 1.5 days/month after 15 years.

The specific impact of these economics on individual faculty workloads has been minimal. In some cases, it has been necessary to reduce the assigned time worked. In other cases, the amount of paid time released for research, public service, and other non-essential activities has been reduced and replaced with direct instructional assignments.

By carrying out a planned and orderly economizing procedure over a period of two or more years, it has been possible to minimize the necessity for discharging individuals for the sole reason of lack of funds, while maintaining a balanced budget. □

Vonne F. Porter, Ph.D.
Executive Vice-President
Southern College of Optometry



Health Competition Announced

DHHS Secrtary Richard S. Schweiker has announced a new annual competition among health professions students to encourage new ideas in health promotion and disease prevention. The new competition would seek the 20 best papers by graduate and undergraduate students in health fields for the new "Secretary's Award for Innovations in Health Promotion and Disease Prevention." The first competition will take place in the coming school year, with papers to be submitted by December 15 and winners announced next May.

The new secretary's award would go to three finalists and 17 semi-finalists each year. All 20 proposals would be published by the Department of Health and Human Services, and cash awards would go to the winners: $3,000 for first place; $2,000 for second; $1,000 for third; and $100 for each semi-finalist.

The competition is open to students of optometry as well as other health and allied health professions. Complete information will be sent to the chief administrator of all eligible schools shortly.

SCO Receives $12,000 Lowenstein Grant

A $12,000 grant from the Lowenstein Foundation, Memphis, Tennessee, the William P. and Marie R. Lowenstein Research and Clinical Fellowship, has been awarded to Southern College of Optometry (SCO). This grant will enable SCO to establish a 12-month optometric fellowship in pediatric optometry, according to Dr. John R. Levene, dean of faculty, Southern College of Optometry.

The first recipient of the Lowenstein Fellowship is Dr. Diane Serex-Dougan, a 1981 graduate of the Southern College of Optometry.

JOE Wins Editors' Award

In a tie for first place in the best journal competition, the *Journal of Optometric Education* captured the award for "Best National Optometric Journal" this year along with the *Southern Journal of Optometry,* edited by Frank S. Gibson, O.D., in the Optometric Editors Association (OEA) annual contest for excellence in optometric publishing.

In addition, an article published in the Winter 1981 issue of the *Journal of Optometric Education* entitled, "An Analysis of Optometric Practices in Rural Alabama," written by Bradford W. Wild, O.D., Ph.D., and Richard Maisiak, Ph.D., won runnerup in the OEA's best article competition.

NEWENCO Technician Program Approved

The Massachusetts Board of Regents of Higher Education has extended the degree granting authority of the New England College of Optometry to include the Associate in Science degree for optometric technicians.

The technician program, solely operated by NEWENCO for the last year, is the outgrowth of a joint program with Fisher Junior College begun over ten years ago.

Because the degree granting authority now lies with NEWENCO, students can complete their general academic coursework at any accredited college or junior college. They then spend an academic year at NEWENCO completing optometric studies. Students also have the option of completing the coursework at NEWENCO first, and obtaining a position as an optometric assistant while completing their degree requirements on a part-time basis.

Applebaum Scholarship Established

The Alvin Applebaum Memorial Scholarship Fund has been established at the Southern California College of Optometry (SCCO) by Morris Applebaum, O.D., director of the Optometric Center of Fullerton, the major teaching clinic of the college, in memory of his father who died recently.

The award will be made annually to a third-year professional student who has demonstrated excellence in patient care, academic achievement and has financial need. The name of the recipient will be inscribed on a perpetual plaque which is displayed in the Optometric Center of Fullerton clinic on the SCCO campus.

ICO Adds New Building

Construction of a new two-story, 50,000 square-foot addition to the Illinois College of Optometry began full-force in June 1982, with projections indicating students and faculty will be using the building in fall, 1983.

The new building has been designated for much-needed office, library, and lecture hall space, freeing up areas in the existing building for clinic expansion, more effective use of space, and improvements in the current facility.

UH Institutes Electronic Prescription Transmittal

With the help of Southern States Optical Company of Houston, the University of Houston (UH) College of Optometry has begun using electronic communication to get prescribed corrective eyeglasses onto a patient's nose with the least amount of problems and undue delay. The key element in the program is a Panafax MV1200, a machine that transmits prescription information over telephone lines directly to a main computer at Southern States Optical.

The Panafax equipment was donated to the UH optometry clinic by R.A. Mackenzie, president of Southern States Optical and a 1966 UH business graduate.

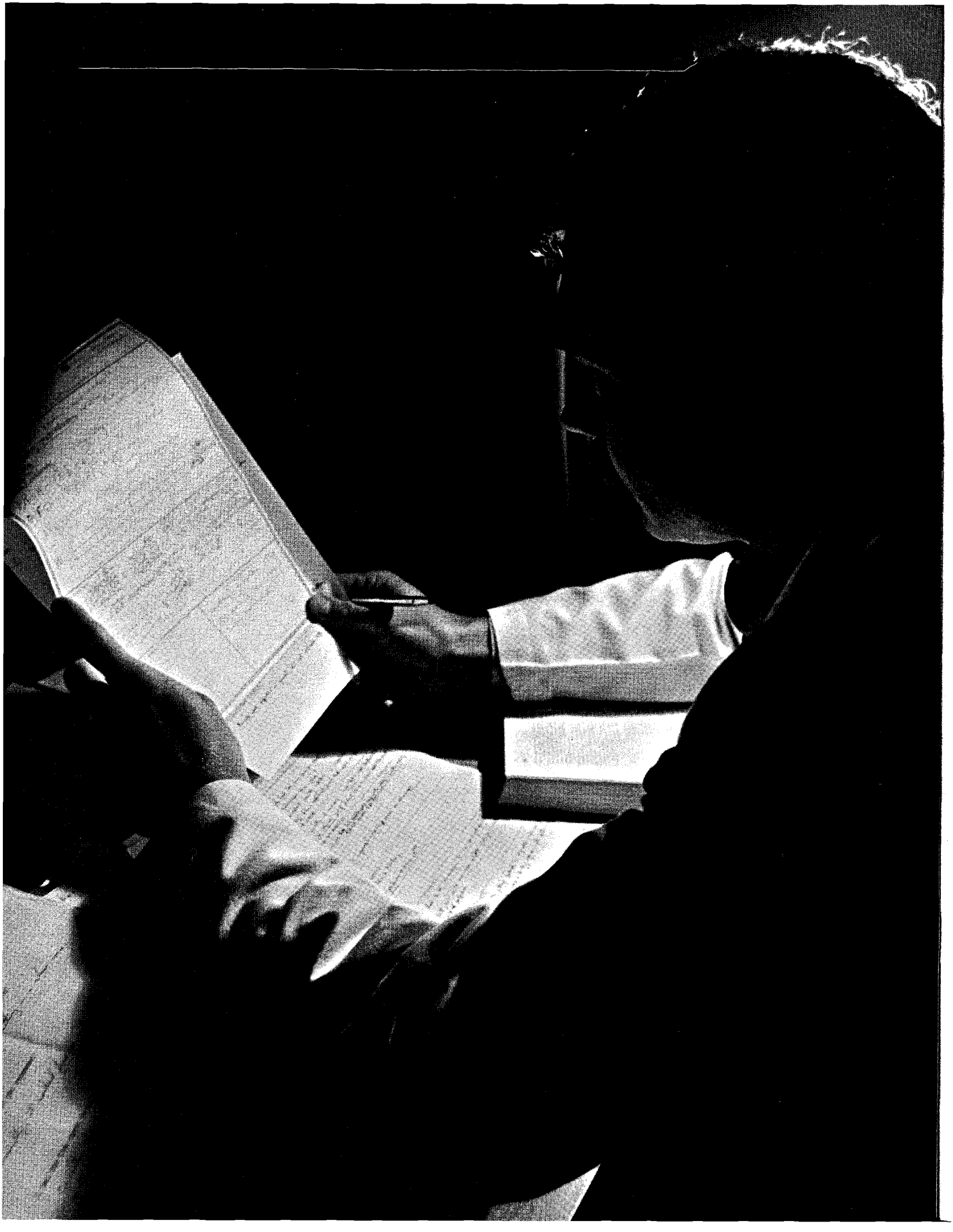
With the two-way communication capability, UH clinic staff will be able to request a status report on any prescription being processed and receive a written answer the same day. Also, orders received over the Panafax go directly to the computer bypassing the usual order clerks. The computer eventually will control every phase of production from layout to grinding to edging, as well as inventory control and checkout of back-ordered prescriptions.

Keeping Up with People...

Dr. Robert Stamper, professor of ophthalmology at Pacific Medical Center of San Francisco and one of the leading glaucoma specialists of the United States, and **Dr. Darrell Carter,** assistant dean of the School of Optometry of the University of California, will lead a group of optometrists and ophthalmologists to the People's Republic of China March 5 to March 26, 1983.

Recently elected to the Board of Trustees of the Southern California Col-

(continued on page 30)



PART I

On the Workload of Faculty:

Defining Faculty Workload

Willard B. Bleything, O.D., M.S.

It has been said that tradition, sentiment, rule-of-thumb and temporizing compromise have been, and unfortunately still are, the dominant methods used in educational administration. Consistent with this pronouncement, for as many as thirty years there has been concern over the evaluation of faculty load. Reeves and Russell,[1] in 1929, commented:

> No thoroughly scientific method of measuring faculty load is now available. Existing measures are unsatisfactory and incomplete. The answers are not yet in. Yet as a practical necessity, some method of measuring and adjusting faculty load—even though only approximate—must be employed.

Real sources for conflict can exist in the assessment of faculty load due to the publics served and their differing goals[2] coupled with the broad mission of a university.[3] There exists a fictional view of college teaching as a life of relative ease from daily pressures, safely insulated from the harsh world of work. The campus skyscraper, known to many somewhat derisively as the "ivory tower," is said to be filled with occupants who seldom descend to reality and who are permitted to ply their trade in bucolic if not idyllic surroundings, gently enveloped in ivy, pipe smoke and chalk-dust.[4] Such stereotyping has caused higher education advocates to row upstream while they negotiate for an appropriate ration of public funds.

In the 1950s, the trend toward lighter teaching loads prevailed; however, from the late 1960s into the 1970s, the trend evolved into increased workloads for faculty. Lombardi[5] feels this change has been largely due to financial difficulties encountered by many colleges. State legislators have indicated minimum workloads for faculty.

With such pressures from outside the educational community it has been increasingly important for higher education to address the issue of faculty load. Affected are all elements of postsecondary education from the community college to the major research university and also those institutions for the education of health professionals. Despite the impact little attention has been given this subject by health professions educators.

What follows is a comprehensive review of the literature addressing the subject of faculty workload under three separate discussion topics: (1) defining faculty workload; (2) elements of faculty workload and their relative weighting; and (3) faculty load formulas. Concluding comments detail five basic "load laws" to be observed in the design of any faculty workload system.

Defining Faculty Workload

The need for a generally accepted definition of faculty workload has long been recognized by such national agencies as the American Association of Collegiate Registrars and Admissions Officers, the American Council on Education, and the U.S. Office of Education.[6] Some have felt the attention to measurement of faculty load arose from concern within the 50s over the "numbers game."[7] College administrators and institutional research specialists were looking for systematic and more efficient ways of deploying scarce faculty "numbers" due to the exponential student enrollment increases forecasted. Clearly, in the internal management of colleges and universities, faculty workload data is useful in planning for the future. From physical layout to projecting personnel, this information is an important tool in preparing capital and current operating budgets. However, in addition to this generalization, there exists a number of specific benefits to faculty and administrator.

Teaching Effectiveness

Morton[8] develops the rationale that teaching effectiveness bears a relation to teaching load. He specifically holds caution for the departmental add-ons to teaching and underscores the point that what can pass for serious incompetence in a teacher is not always rooted in professional qualifications but rather, lack of judgment in apportionment of time. Hicks,[9] in 1960 while reporting to a conference sponsored by the American Council on Education, makes the statement that no objective study has ever been made of the relationship between quality of faculty performance and faculty workload and questions if such could be done until it is learned how to measure quality objectively. His approach is to make comparisons with industry. Citing the studies by psychologists and sociologists in industrial settings he points out that overwork, or "overloading" can adversely affect quality of work. Similarly, faculty workload can be increased to the extent that the quality of the work will suffer.

Whether the converse is true—that the lighter the load, the higher the quality—seems another matter entirely.

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The meat in the argument is the tendency for faculty to be loaded with assignments of dubious value when they might be doing more useful things. Perhaps one of the greatest benefits, then, to be gained from faculty workload studies is the opportunity to analyze and define what each faculty member is doing in order to use best each one's time and energies. To describe this particular set of circumstances, Hicks turns to a term in economics—"higher profit combination," meaning to seek that combination of activity that realizes the highest yield or profit. Therein lies the argument that a study of faculty workload can enhance teaching effectiveness.

"A good understanding of faculty work activities is important in assessing the effect of new elements and changes in higher education."

Time Analysis of Work

As early as 1937 pleas were being made relative to the need for time analysis of instruction;[10] strong exception was being raised as to the use of student credit hours as a means of measuring faculty work. Some twenty-four years later, in 1961, the American Council on Education published an important work on the measurement of faculty workload.[11] This introduced the view that very few businesses or institutions of comparable size, complexity and diversity of function operate with as little detailed knowledge and understanding of the basic activities of their workers as do most colleges and universities. Studies of faculty load provide vital information which can be used to improve an institution in many ways. A good understanding of faculty work activities is important in assessing the effect of new elements and changes in higher education.

Typically, in a time analysis study, summary is made of data on faculty activity by the administrative head of any particular unit. This means that the administrator must determine how his/her conception of what faculty members are doing agrees with the individual faculty person's evaluation. Stecklein[11] reports that this experience has caused many to reassess discrepancies between their impression of what a faculty member is doing and the individual's account. Better understanding can result.

Wessel[12] expresses grave concern for the tendency to measure an instructor's prestige on how little time he/she teaches and especially by the infrequency of contacts with undergraduates, the reason given for drastic reduction in teaching loads almost invariably being the promotion of research by faculty members. The assumption is made that release from heavy classroom assignments will lead the typical faculty member to devote most of his/her time to scholarly activities. Thus, time analysis of faculty activities can be useful in determining an appropriate mix of responsibilities per individual faculty member—specifically, teaching and research along with professional and community activities.

During a curriculum planning discussion a school of nursing[13] found still another reason for doing a faculty time analysis study. In this case an evaluation of personnel needs was being done relative to a proposed curriculum change. By comparing the hours available for teaching to the hours required for teaching it was possible to project the need for additional faculty. The time analysis of faculty work can build the rationale for appropriate staffing.

Equity of Load

A position was advanced earlier that teaching effectiveness could be affected adversely due to the tendency for faculty to become loaded with assignments of dubious value. Hicks[9] develops the point further when he stresses the need to make certain faculty are loaded with the right things, rather than with trivialities which nevertheless subtract from the effort which can be put to the really important job a professor may do. He states faculty work studies can serve well the function of protection for that "good" professor who tends always to be overloaded: it is their nature to be so. The duty of the administrator is to protect the time of these professors so that it may be used to the fullest extent for what they can do best.

Therefore, along with the other arguments for faculty activity analysis, a further premise is advanced that equity is important: equity among individual faculty members, among departments and colleges, and among institutions.[14]

Another wrinkle yet presents itself in that some confusion and uncertainty on the part of both faculty and administration can exist concerning the actual duties of faculty members. One may be hired as a teacher and assigned a "full teaching load;" yet when the time comes to award promotions and salary increases, these awards may not be based on the quality of teaching but rather on the quality and quantity of research conducted in the teacher's spare time.[15] Surely, this is yet another form of inequity. One outcome of faculty workload studies should be the more effective coordination of the expectations of department heads, academic deans, promotion committees, and the like, with the intentions of faculty members.

Starr[16] discusses the development of a unit system devised and implemented in the Department of History at Princeton University. He explains how mem-

bers of the senior and junior faculty tended to view one another with suspicion, each often convinced that the other was not doing his/her share of the work. Also rare is the social scientist or teacher in the humanities who does not believe that colleagues in the natural sciences or professional schools are getting more money for less work. Thus, the equity question comprises concerns to see that faculty are loaded with the right things, that there is equity of load among faculty, that evaluation measures performance of assigned load, and that load matches time available.

Cost Analysis

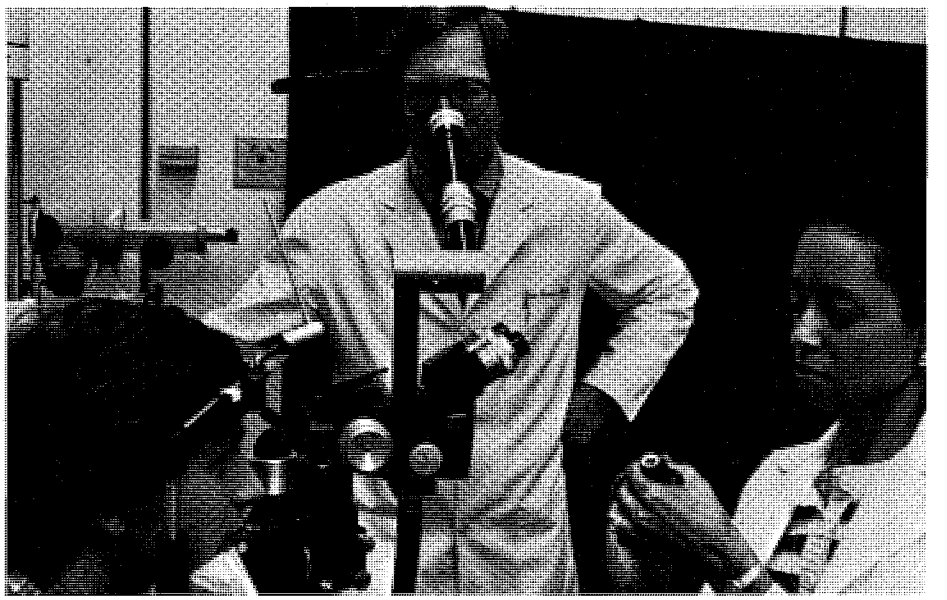
The health professions, for the most part, have been rather silent through these years of faculty-workload studies. In fact, it can be noted that when faculty workload studies have been conducted within multi-university campuses where a school of medicine exists, typically that particular school has been excluded from the study. Interest on medical campuses did begin to appear in the late 1960s through the early 70s centered around analysis of cost. Stoddard[17] reports a substantial increase in the demand by government for detailed cost analysis of medical education during this period.

It is generally agreed that of those costs contributing to education, "personnel" represents between 50 percent to 80 percent of the total. This being true, a meaningful cost of education study must include a significant component relative to faculty effort, the chief single element of cost. In applying this approach, caution is advised in the proper evaluation and use of faculty effort-reporting data.[17] It must be remembered that it is merely a tool for cost analysis. As such, it does not possess the precision of a cost-accounting system; this is not the intention of cost analysis. Cost accounting implies a mechanism for the day-to-day allocation of direct and indirect costs to cost centers within an organization. Cost analysis means a single analysis—a snapshot—of the total cost of an organization during a particular fiscal period.

As such, the purpose of a cost analysis is to find and present costs rather than to monitor them. First, it is important to examine what inputs will be required to achieve given output targets and then how costs should be assigned to a particular process. The management tools aimed toward the first question may be labeled activity analysis; those aimed at the second are called cost analysis. These two strains of analysis meet in what might be called *optimization analysis,* the analysis of least-cost means of meeting given output objectives or maximum feasible output objectives for a given set of basic inputs.[18] Thus, it can be stated activity analysis is particularly useful in predicting the consequences as to the costs of specific simulated decisions: a way to "try on" various scenarios.

The Association of American Medical Colleges (AAMC) has reported on undergraduate medical education cost elements.[19] They developed the concept of a hypothetical faculty member fully involved in education, describing a profile for a basic science and clinical science faculty member. The Institute of Medicine [20] also conducted a study which utilized actual faculty activity analysis data. Like the AAMC they developed a profile for basic science and clinical science faculty. These resulted in cost constructions as a means of defining the essential activities in which a faculty member must participate in order to produce a quality educational product.

Another approach has been taken by Harper and Gonyea.[21] They set out to obtain faculty activity data that could be used for planning purposes. A project was designed to identify the perceptions of faculty members in several allied health education programs as to the actual and ideal distributions of faculty time. To determine if perceptions of ideal activities differed among the faculty members, program directors, and administrators, data were solicited from each. The underlying rationale was that if one could obtain a measure of actual and ideal distributions of faculty activities from all involved individuals the data would have planning value for all groups. This approach adds yet another quality as a resource for planning: the development of general statements concerning ideal faculty activities.



"A meaningful cost of education study must include a significant component relative to faculty effort, the chief single element of cost."

Sommers[22] stresses the point that academic communities have come under intense pressures to balance expenditures with income. As a result, the concept of university productivity as a management technique now is found in academia. Borrowing from experiences at the University of New Haven this author offers various strategies to increase productivity. Emphasis is placed on revenue-cost ratios, class size and faculty teaching schedules as primary factors in productivity improvement. Enochs,[23] a graduate studies dean, brings to light still another important reason for conducting workload studies: the problem of pay. He makes a parallelism to attorneys and other private-practice professionals. They are considerably freer than teachers to decide the number of cases they will take, and in contrast with teachers, the more cases

showed that the typical professor worked 54.8 hours per week[33] with the average faculty member devoting 30.4 hours to teaching activities; 8.1 hours were actual "contact" hours with 17.3 hours spent on directly related activities such as lecture and media preparation, grading, and meeting with students. Student services, administrative duties and committee participation were reported at a median value of 6.5 hours. Public service averaged 2.1 hours. Wendel[4] reports on a faculty member workload study in 1977 that involved five different state colleges.* On the average of a 51.6 hour work week, 30.8 hours were involved in teaching, 4 hours in advising, 5 hours in research and 11 hours in service activities. These and various other studies are presented in Table 2.

Teaching activities are reported from 25 hours to 41 hours per week in these particular studies for a percentage of time commitment from 46% within the University of California system to 74% within the Wisconsin State University.

*Chadron State College, Kearney State College, Peru State College, Wayne State College, Iowa State University

In an inverse relationship, research time is reported from 3% at Wisconsin State University to 38% in the University of California system. Some caution is appropriate in the interpretation of the hours reported and effort reported as a percentage of total time. With the exception of those institutions in Wisconsin, there is little spread of hours reported in teaching related activities (25-33 hours). Many who have conducted faculty activity studies have noted the teaching related activities to be representative of what has been "assigned" by the host institution with the bulk of the scholarly endeavors being represented in those hours reported that exceed the usual "labor force" work week norm of 40 hours.

To test this notion, it is of interest to make a separate distribution by subtracting the research hours reported from the total hours reported. Doing so makes a teaching activity work week of 37 hours to 53 hours with 44 as the mean. In other words, the major portion of the variability in total hours is accounted for in research time reported rather than in teaching time assigned. This would suggest that factors other than release time from teaching play the major role in determining the commitment of faculty to research.

As has been noted, many of the faculty load studies conducted have excluded health profession schools. In 1972-73 a cost of education in health professions study was conducted by the National Academy of Science, Institute of Medicine.[20] This included the disciplines of medicine, osteopathy, dentistry, optometry, pharmacy, podiatry, veterinary medicine and nursing. Within the study, detail relative to load distribution in hours per week is found (see Table 3). Teaching activities range from 10 hours to 33 hours per week with a mean of 23 hours. Two-product activities as joint teaching/patient care and joint research/teaching range from 1 to 14 hours per week with a mean of 8 hours. Independent research ranges from 0 to 16 hours/week with a mean of 6 hours. Patient care related activities are reported from 0 to 9 hours per week with a mean of 3 hours. Service activities average at 2 hours per week. The average time per week for administrative activities is 5 hours; professional development averages 4 hours and writing averages 1 hour. The total work week spans from 37 to 59 hours with

TABLE 2
Average Hours Per Week of Full-Time Faculty by Activity in Various Studies Reported 1970-78

Activity	Mean	Univ. of Calif (San Diego)[24]	Univ. of Conn.[33]	Five State Colleges (Average)[4]	Univ. of Maryland[42]	Univ. of Wisconsin[28]	Wisconsin State Univ.[28]	Univ. of Calif. (UC Sys.)*	Eight Mid-Western Universities (Average)[35]
Direct Contact Teaching	33	30	30	31	33	38	41	12	15
Preparation and Evaluation								13	18
Research	11	15	14	5	17	7	2	23	9
Public Service	9	2	2	11	9	2	1	12	2
Administration		5	6			5	5		5
Professional Development		6	2						
Other	2	2		5	3	2	6		
Total Hours/Week	55	60	54	52	62	54	55	60	49

Note: Numbers have been rounded. *News Item, Chronicle of Higher Education.

an average of 51 hours. Podiatry schools report the lightest work week and pharmacy schools the heaviest work week.

Table 4 draws a comparison between the hours per week reported by full-time faculty in higher education in general as compared to health professions schools, the difference averaging 55 hours to 51 hours respectively. Like activities are grouped and compared for these two groups in Table 4.

It is of interest to note the degree of similarity in percentage of effort in teaching activities and "other" with the noticeable differences being in independent research activities and in public service-administrative-professional development activities. According to these studies, research is given more emphasis in higher education in general than in the health professions (20% versus 12% effort), while the area of public service-administrative-professional development is given greater emphasis in the health professions (16% versus 23% effort). It is recognized that these statements are generalizations and difficult to apply to any particularly paired institutions due to the extreme variability in both groups.

Research

Since one of the marked differences between institutions and school disciplines relative to total hours reported seems a function of research emphasis, a closer look at this area is in order.

Evenden, et al.[34] show that faculty members in land-grant institutions, state universities, and private nondenominational institutions spend substantially more time on research activities than do faculty members in teachers colleges and junior colleges. They show also that teaching clock hours are only slightly reduced for faculty members engaged in research. In fact, the study showed that larger percentages of faculty with heavy workloads engage in research than do those with lighter loads. While there is some tendency for the quality of research to go up as the class load is reduced, the amount of research actually accomplished does not seem, in most cases, to be related closely to the classroom teaching load.* Rather the individual's enthusiasm for research seems to be the determining factor.

Sexson[35] stresses there are many extremely effective faculty members who simply do not desire to perform research; they are more devoted to the classroom functions. Sexson comments, "Although the importance of research by faculty members cannot be denied, granting a 'blanket' amount of time for research for every single faculty member would be highly impracticable."

Referring to Table 2, of those studies listed, the greatest time commitment by faculty to research is reported within the University of California system. On a weekly basis, 23 out of 60 hours, or 38% of the average week, is devoted to research. In a study published by the

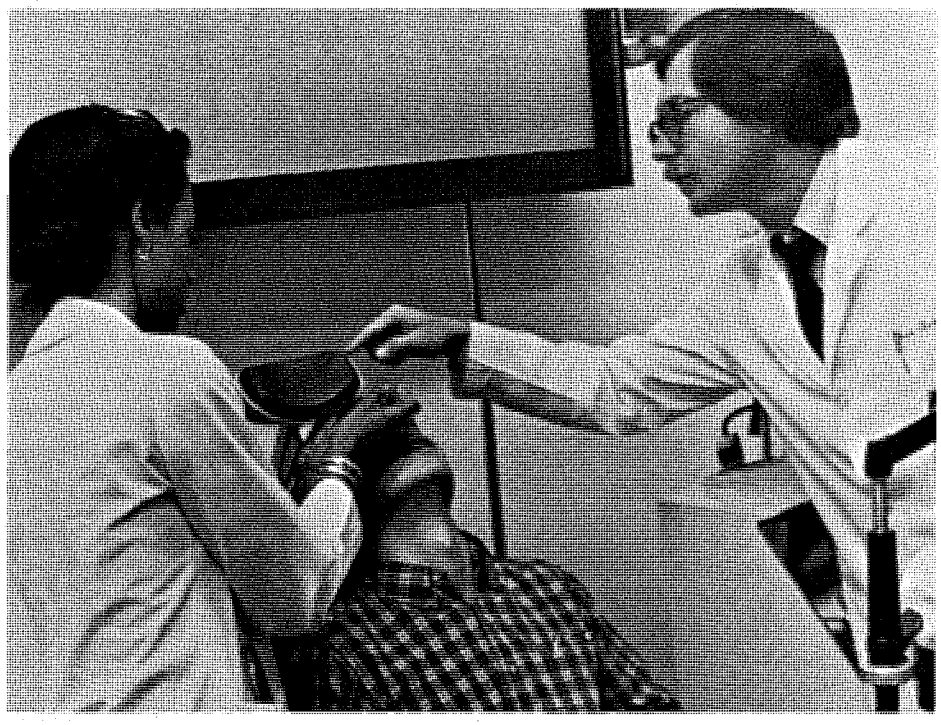
*In one report the comment is made that whenever the teaching load has climbed to 15 hours per week research practically stops.

TABLE 3
Average Hours Per Week of Full-Time Faculty by Activity in Sampled Health Professions Schools 1972-73

Activity	Mean	Medical Schools: Basic Science	Medical Schools: Clinical Science	Osteopath. Schools	Dental Schools	Optometry Schools	Pharmacy Schools	Podiatry Schools	Veterinary Medicine Schools	Nursing Schools
Teaching										
• teaching	6	5	4	5	6	9	10	5	6	8
• preparation	10	8	4	10	8	10	15	9	8	17
• curriculum devel.	7	3	2	3	4	5	4	4	8	6
Joint										
• teaching/ patient care	7	1	11	12	9	11	1	9	4	8
• research/ teaching	1	4	1	*	1	1	2	*	2	*
Research										
• independent research	6	16	7	2	5	3	7	*	10	1
Patient Care										
• patient care	2	—	6	3	2	3	2	1	3	*
• hospital/clinic admin.	1	—	2	1	*	3	1	*	2	0
Service	2	3	3	1	2	1	3	1	7	2
General Support										
• administration	5	6	6	4	5	6	7	5	1	6
• professional development	4	5	5	4	6	5	5	2	4	4
• writing	1	2	1	*	1	*	2	*	1	1
Total Hours/Week	51	53	52	45	49	57	59	37	56	53

Source: National Academy of Sciences, Institute of Medicine, 1974. Note: Numbers have been rounded. *Less than 30 minutes/week.

"The defining of faculty workload for the best-time-use and energies combination—the high profit combination—can enhance teaching effectiveness."



coming their way, the more they can and do charge. To a certain extent, then, other professions experience a satisfactory sense of balance between their loads and their remuneration. Therefore, another purpose to be served by workload studies may be to gather data in support of salary adjustment for faculty.

Accountability

During 1976, the University of California, San Diego (UCSD), conducted a study[24] to review the full spectrum of professional activities of a faculty member.* A principal incentive for the study was to provide a basis for greater understanding, internal and external to the university, about the extent of UC goals, what UC faculty members' responsibilities were, how these responsibilities were fulfilled and the interrelationships of those responsibilities. In this regard, a university lacks the quantitative and rather simple measures of profit and loss found in a business organization and yet the accountability in academia is greater than that of business. Starr[16] traces a short history relative to this period of accountability. For decades, questions relative to the extent of the obligations of faculty to their students and institutions were settled without ceremony by department chairmen and deans who set workloads on an ad hoc basis after consulting with members of their teaching staff. New faculty were hired as the need arose, and the entire system remained more or less undisturbed. Of recent, however, this seems under attack. "State auditors—notably in California, Florida, and new York—have demanded that campus administrators call professors to account for their supposedly lax work schedules," states Starr.

Swofford[25] makes the point that, especially now, legislators are beginning to demand that an accounting of education funds be given. He states that all institutions need to measure the value of their services in order to justify their existence to themselves and to their public. Until recently, however, this concept had been but weakly applied in the world of education; campus and public debate had focused on faculty workloads. Creswell[26] feels this represented a low ebb of public confidence in colleges. He points to collective negotiations in academia as a driving force to such debate. Discussions taking place at the negotiations table were teaching load, summer employment, office hours, calendar and class size, because they became items of negotiation in contracts. For some states, the legislature mandated specific faculty workloads. He points out the need to gain faculty acceptance of workload analysis and to demonstrate to faculty the benefits of using activity data. His research indicates that these are achievable objectives.

Conclusions

The defining of faculty workload for the best-time-use and energies combination—the high profit combination—can enhance *teaching effectiveness.* Vital management information allowing assessment of individual faculty roles, teaching function versus research function and projected faculty needs are all benefits derived from a *time analysis of work* by faculty. An *equity of load* can be achieved via more precise definement, thus offering protection for the over-committed professor, providing for relative load balance between departments and institutions, achieving relative apportionment of load for the junior/senior faculty, and allowing symmetry of assignment against available time. Effective *cost analysis* studies using faculty load data are useful tools in determining present and future costs. *Accountability* of higher education is being demanded by the general public, state and federal government. Faculty activity translated into program outputs and cost can be directed toward these demands.

Durham[27] provides a thoughtful summary statement: "As one who is convinced that faculty improvement, including salary status, in the next decade is largely dependent on faculty ability to increase its productivity, qualitatively and quantitatively, I submit that future intelligent use of faculty workload data is a *sine qua non* of faculty life and of university administration."

*Excluding the School of Medicine.

PART II

Elements of Faculty Workload and Their Relative Weightings

The traditional approach of measuring a faculty member's workload only in terms of hours spent in formal teaching is as erroneous as measuring the workload of an attorney in terms of hours spent arguing cases in court.

A single indicator as classroom instruction presents a considerably limited view of the mission of higher education. Several other indicators which measure other aspects of teaching, as well as research and public service, are needed to present a complete view.[28]

Moreover, returning to the analogy of law, if the hours in court become so high the attorney has no time for case preparation then effectiveness will diminish. In a like manner, faculty members who spend excessive time lecturing or meeting with laboratory classes will have little time for the preparation of lectures and development of laboratory procedures, all of which can result in a less effective teacher.

Charters,[29] Heiss,[30] Howell,[31] Harper,[32] and Witmer[28] all have discussed the issue of "elements" in faculty load. These discussions go back nearly forty years but still remain somewhat unsolved, at least to the satisfaction of both faculty and administrator. Sifting through that which has been written, perhaps one of the most concise yet comprehensive presentations has been made by Harper[32] in 1978. Table 1 has been adapted from this paper. It describes as elements of load: direct contact teaching, preparation and evaluation, research, public service, administration and professional development.

According to Heiss[30] the undergraduate teacher averages between 12 to 15 hours a week in the classroom with the remainder of the time being spent on approximately seventy different activities related to the academic role.

In the end, the point that bears making is the need to identify definable activities that represent the entire scope of faculty responsibility—the assignment. This step must be accomplished before consideration of equity can be achieved along with the need to obtain data for the appraisal of cost associated with these activities.

Weighting

Selecting those elements as described by Harper,[32] it is now appropriate to examine the relative weighting given to each and to examine what other factors may influence change in the relative weighting. First, those studies that give some direction to the basic question of relative weight (time) or effort given to each workload element will be considered.

Faculty members at the University of California, San Diego (UCSD),* reported in a 1976 survey that they spent approximately 60 hours per week in all university responsibilities with nearly 30 hours directly related to instruction at all levels.[24] General scholarship, student related activities, public service, and administrative responsibilities required an additional 15 hours per week with an equal amount devoted to research. A study of the faculty work week at the University of Connecticut**

*Excluding the School of Medicine.
**Study excluded librarians, extension agents and health center faculty.

TABLE 1
Elements of Faculty Load

Activity	Examples
Direct contact teaching	Teaching in classroom; laboratory; clinic; individual studies; academic advising.
Preparation and evaluation	Developing instructional aids, monitoring equipment, arranging for clinical experience, labs; preparing lectures; lab set ups; evaluation of instructional activities; evaluation of student work, grading papers. Course/curriculum development.
Research	Curriculum, laboratory, clinical, systems-oriented research; writing proposals; collecting/analyzing data; supervising research projects.
Public service	Consultation; service in a professional capacity to organizations; professional practice.
Administration	Completing forms, time schedules; committees.
Professional development	Professional improvement; taking graduate courses, readings in field to keep current; professional meetings for self-improvement; publications and presentations.

Center of Research and Development in Higher Education, University of California, Berkeley,[30] the statement is made, "Explicitly and implicitly major universities make it clear to their non-tenured faculty that unless they publish within a specified period of their appointment, their chances of retention are extremely remote. Thus, with respect to the university, only the productive scholar need apply." Also it is of interest to note, in the few attempts that have been made to measure and compare teaching effectiveness of those who publish with those who do not, student ratings tend to favor the former.[30] Table 2 shows a noticeable reduction, when reported as percent of effort, in teaching activities in the University of California system compared to other institutions; however, the weekly hours devoted to teaching are not all that different. The mean hours per week for teaching activities of all studies was 33 and the UC study reported 25 hours. However, this reduction coupled with the finding that UC faculty report a 60 hour work week makes for a 38% effort commitment to research by these faculty.

Time for and commitment to research is oftentimes discussed in relation to graduate teaching loads as compared to undergraduate, the graduate faculty member having a heavier involvement in research. The American Association of University Professors (AAUP) policy documents[36] offer the following guidelines for teaching loads.

Hours Per Week of Formal Class Meetings

	Undergraduate	Graduate
Maximum	12	9
Preferable	9	6

Brand[37] describes various studies done in 1972 by the National Education Association where it was found the semester hours for faculty teaching undergraduate courses in four-year institutions was 12 as an average. In comparison, the average semester hours for faculty teaching graduate courses was 10.

As mentioned earlier, from studies reported it appears the time spent in research by faculty in general higher education exceeds that of faculty in the health professions. Research activity among health professions faculty ranges from less than 30 minutes per week in schools of podiatry to that of 16 hours per week by the basic science faculty in schools of medicine. Clinical sciences faculty in medical schools report an average of 7 hours per week, however. The average reported for all health professions faculty is 6 hours per week. A panel of medical educators and administrators with the task of assembling criteria for an effective school judged the amount of research essential to education as 0.67 hours in research per hour of instructional activity for basic sciences and 0.30 hours in research for each hour of instructional activity for clinical sciences.[20]

Fawcell[38] describes problems related to the low commitment to research by nursing faculty:

> The low status currently accorded research in nursing schools probably reflects peer expectations rather than those of the parent institution. New faculty members model the behavior of senior faculty who apparently have little commitment to research. It is likely then, that lack of proper socialization is the predominant barrier to nursing research productivity.

Perhaps one of the most scholarly approaches to the question of faculty commitment to research is the study conducted by Hesseldenz in 1976 at the University of Kentucky, Lexington.[39] Employing Holland's theory of vocational choice,* a multivariate analysis of

*Persons with similar personality characteristics tend to choose occupations which are suitable to their temperaments; these persons and occupations fall into six general personality categories: realistic, investigative, social, conventional, enterprising and artistic.

TABLE 4
Average Hours Per Week of Full-Time Faculty by Activity Comparing Higher Education in General to Health Professions Schools

	Higher Education in General			Health Professions Schools		
	Mean	Percent Effort	Range	Mean	Percent Effort	Range
Teaching	33	60%	24-41	31	60%	11-47
Research	11	20%	2-23	6	12%	0-16
Public Service • Administrative • Professional Development	9	16%	6-13	12	23%	4-22
Other	2	4%	0-6	3	5%	0-6
Mean Total	55		49-62	51		37-59

Note: Numbers have been rounded.

variance showed that faculty members of the Holland personality types not only differed in effort reported in instruction, research, public service, and institutional-professional activities, but that the findings were supportive of Holland's theory. They found that the highest hours for the variable "research hours" occur in the *investigative* and *realistic* classifications; the lowest in *social* and *artistic* categories. According to the theory, investigative and realistic persons value analytical, scientific and research activities more than do social and artistic persons. Relating this finding to those faculty within the health professions schools, this may explain the relatively high activity level in research reported by the basic science faculty and the much lower activity reported among those faculty in the clinical sciences.

According to the Holland theory, the investigative and realistic persons—who in this study reported the greatest research hours—perceive themselves as having mechanical ability, to be scholarly and intellectually self-confident, but to be lacking in human relations and in persuasive or leadership ability. In contrast, the social persons—who in this study reported the fewest research hours—perceive themselves as liking to help others, understanding others, and lacking mechanical and scientific ability. They value social and ethical activities and problems and acquire human relations competencies, to the deficit of manual and technical competencies.

There seems strong compatibility, then, between the findings of Hesseldenz and the research interests as reported in the other studies described. Basic scientists by their own interests and basic personality traits may seek research activity while faculty in the clinical sciences—perhaps initially directed to this "calling" due to their interest in helping people—may avoid research activity, again due to their own interests and basic personality traits.

Academic Rank

The question has been posed in more than one study as to whether the various elements of faculty load vary as a function of academic rank. According to Sommers,[22] senior professors traditionally have chosen their own schedules and tend to select specialized courses close to their research interests. Such courses often have low enrollments. Large introductory courses therefore are taught by junior faculty who get what their senior colleagues have cast aside. In a study at Princeton University,[16] it is stated the number of teaching hours constituting a full schedule differed according to academic rank, with professors (PROF) teaching nine hours, associate professors (ASOP) ten, and assistant professors (ASIP) eleven. These differences were a natural source of discontent, junior faculty considering themselves overworked and senior faculty thinking their extra labors were unrecognized. Using a unit value system attached to each task they discovered, however, all were working at about the same level, notwithstanding the assigned teaching differentials; they merely spent their time differently.

The first question to examine is that of total weekly hours reported as a function of academic rank. Using as a sample those institutions in Table 5, variation is noted between total hours reported by institution; however, there is an amazing consistency in total mean hours reported for PROF, ASOP, ASIP ranks with lesser hours reported by INSR and LECR ranks. This seems consistent with the findings at Princeton University.[16] Sample size alone could account for the lesser hours reported for INSR and LECR.

The second question to examine is

TABLE 5
Average Hours Per Week of Full-Time Faculty by Academic Rank

	Mean	Humboldt State College[50]	Northern Mich. University[50]	University of Toronto[50]	Madison College[40]
Professor PROF	57.3	54.9	58.5	60.0	55.8
Associate Professor ASOP	57.9	58.5	63.0	56.9	53.2
Assistant Professor ASIP	57.9	57.4	62.8	56.9	54.7
Instructor INSR	55.8	54.4	55.3	*	57.9
Lecturer LECR	52.9	59.0	*	54.8	45.0
Mean	56.4/57.3	57.1	59.6	58.0	54.8

*Data not available

that of percent of time devoted to various activities as a function of academic rank. Table 6 compares various studies with this question in mind. Considering these sources there seems to be some tendency for teaching activity to decrease and public service activity to increase the higher the rank. Research activities and "other" activities remain about the same irrespective of rank as a general statement.

There is not a general agreement on such a generalization, however. Jackameit[40] at Madison College found professors and associate professors devoted a larger percentage of time to research and scholarly activities than was evidenced by the college as a whole. However, Hesseldenz and Rodgers[41] in a comprehensive statistical study of 2,406 classes taught at the University of Kentucky concluded:

(a) Average credit hours for classes taught by assistant professors are significantly higher than for classes taught by each other rank; (b) contact hours for classes taught by professors are lower than those for classes taught by each other rank; (c) associate professors average less effort in preparation-grading hours than do instructors and the average of all other ranks. Instructors spend significantly more time in this effort than do all other ranks; and (d) professors spend less time in average class total hours than do assistant professors and instructors. Associate professors exhibited smaller values than assistant professors for this variable. Instructors had higher values for this variable than any other rank.

Level of Instruction

Differentiation of instructional workload according to level of instruction is presented in a position paper by the American Association of University Professors (AAUP).[36] The AAUP proposes a teaching workload of 9-12 credit hours for teachers of predominantly undergraduate courses and 6-9 credit hours for instruction at the graduate level. At most institutions of higher learning, the higher the rank of the faculty member the higher the level of classes taught. If the AAUP guideline is followed, one effect is the releasing of proportionately greater amounts of time to senior faculty members. The release of time for *what*, however, is not clear. Since higher-ranked faculty members teach more of the higher level courses, and some propose that higher level courses take greater time in preparation, the inference is that higher-ranked faculty members spend more total time on the courses they teach. But do they?

This question among others was researched at the University of Kentucky.[41] In the comparison of level of instruction with class total hours, there was neither a significant relationship overall nor by rank at the .01 level. Virtually no relationship was found to exist between the level of instruction of a class and the total amount of time spent on the class; as much time was spent on a lower-division class as was spent on a graduate class or as little. This conclusion is reinforced by studies at the University of Maryland.[42] They found that the production of student credit hours per full-time equivalent faculty member varied greatly by segment, by level of instruction, and by field of knowledge, but the analysis of course load information by course level revealed nearly constant amounts of

TABLE 6
Percent of Time Per Week of Full-Time Faculty by Activity by Academic Rank

Activity		$\bar{X}$	σ_{n-1}	Univ. of Maryland[42]	Madison College[40]	Humboldt St. College[50]	State Colleges[42]	Private Colleges[42]	Community Colleges[42]
Teaching	PROF	55.5	6.7	43.8	54.9	61.9	57.9	52.9	61.4
	ASOP	61.1	5.5	50.3	62.8	64.4	63.5	60.8	65.1
	ASIP	64.6	6.1	53.2	70.2	64.1	64.3	68.2	67.6
	INSR	62.6	5.1	59.8	55.8	62.3	66.0	61.3	70.6
	LECR	—	—	*	62.3	73.1	*	*	—
	Mean	60.9							
Research	PROF	17.6	7.6	30.2	15.2	7.3	15.5	21.4	15.9
	ASOP	17.1	8.2	29.7	15.6	6.1	13.5	22.9	14.8
	ASIP	16.4	6.7	28.0	13.0	7.8	17.8	16.8	14.9
	INSR	15.9	7.0	24.7	10.4	6.3	16.6	22.7	14.7
	LECR	—	—	*	11.1	16.1	*	*	*
	Mean	16.75							
Public Service	PROF	21.8	3.7	19.2	27.8	25.0	20.4	19.9	18.6
	ASOP	16.7	4.9	13.3	20.1	23.9	17.8	10.0	15.4
	ASIP	14.3	4.4	12.8	12.9	22.9	13.7	10.1	13.5
	INSR	15.2	5.7	10.2	18.1	25.5	13.4	13.2	10.8
	LECR	—	—	*	25.5	9.1	*	*	*
	Mean	17.0							
Other	PROF	5.1	1.7	6.8	2.1	5.7	6.2	5.8	4.1
	ASOP	4.9	1.8	6.7	1.5	5.5	5.2	6.3	4.7
	ASIP	4.7	0.8	6.0	3.9	5.2	4.2	4.9	4.0
	INSR	6.3	4.7	5.3	15.7	5.9	4.0	2.8	3.9
	LECR	—	—	*	1.1	1.6	*	*	*
	Mean	5.25							

*Data not available.

time expended in preparation and administration per credit hour taught, regardless of course levels.

Other Variables

Some authors[34] have discussed the relative merits of considering other variables as class size, nature of the subject taught, duplicate sections, previous experience and method of presentation. There seems little evidence to indicate class size *per se* has much to do with teaching load or even educational product although there are opinions to the contrary. Of perhaps more importance is the nature of the subject being taught. For example, some[34] have postulated 9 hours of freshman English is equivalent to 15 hours of freshman algebra. "Subject matter coefficients" have been proposed for use in secondary schools and at the college level, such as: English, social studies and science, 1.1; foreign languages and mathematics, 1.0; shop, art, 0.9; and music and physical education, 0.8.* Duplicate sections, of course, add to contact hours and evaluation hours but tend to have preparation time as a constant. The literature is inconclusive on the question of preparation time as a function of previous teaching experience. Method of instruction seems a demonstrable variable, however. In a study that included 11,648 courses,[42] it was found that lecture, recitation/discussion and seminar methods of instruction averaged between 1.5 to 1.7 preparation and administration hours per credit hour. Laboratory instruction averaged 1.3, and independent study/tutorial averaged 0.7-0.8 preparation and administrative hours per credit hour.

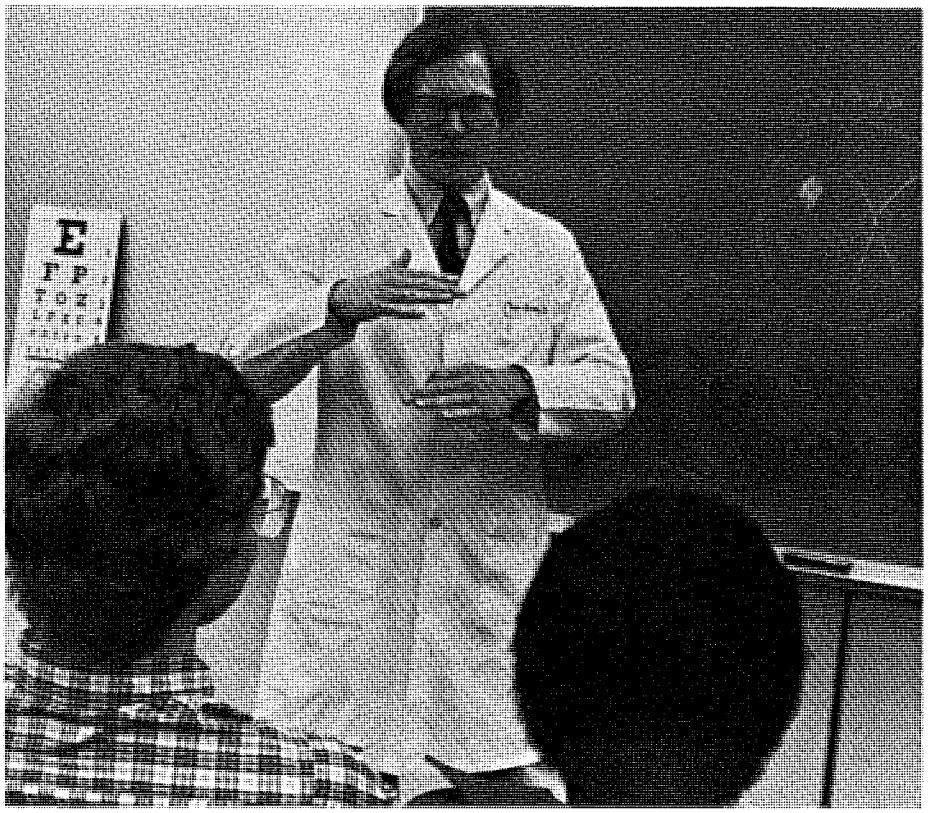
Conclusions

Studies from various institutions report faculty spend from 25 to 41 hours per week—46% to 74% of their work—in teaching activities. A "typical" faculty member spends 28 to 33 hours weekly in activities that relate to teaching. The variability in total hourly work week reported tends to be a function of time spent in research endeavors rather than assigned teaching load. While some studies have indicated that some reduction in teaching load for faculty engaged in research does take place, there is evidence to show that larger percentages of faculty with heavy workloads engage in research than do those with lighter loads.

In a study of the educational institutions of the eight major health professions, it was found the faculty members' average week consisted of 23 hours in teaching activities; 8 hours in joint teaching/patient care or joint research/teaching; 6 hours in independent research; 3 hours in patient care related activities; 2 hours in service activities; 5 hours in administrative activities; 4 hours in professional development; and 1 hour in writing. Their average work week was 51 hours as compared to 55 hours for higher education in general. Research is given more emphasis in higher education in general, and public service/administrative/personnal development is given greater emphasis in health professions education. Faculty who are in the investigative and realistic academic areas report the greatest hours spent in research; the fewest hours are spent by faculty in the social and artistic areas.

Faculty report the same total workweek hours regardless of academic rank, but there seems some tendency for teaching activity to decrease and public service activity to increase the higher the rank. AAUP guidelines propose a lesser teaching load for graduate faculty as compared to undergraduate faculty. In examining whether this release time is due to more preparation time required for instruction at a higher level, it was found no relationship exists between the level of instruction of a class and the total amount of time spent on the class.

As to method of instruction, it has been found that about 1.6 preparation/administration hours per week are required for lecture, recitation/discussion and seminar methods; laboratory instruction averages 1.3 hours per week and independent study/tutorial methods average 0.75 hours per week per credit hour.



"Studies from various institutions report faculty spend from 25 to 41 hours per week—46% to 74% of their work—in teaching activities."

*The reader is referred to Sexson[43] for a comprehensive study of hours reported for preparation as a function of subject matter taught.

PART III

Faculty Load Formulas

One can propose a number of arguments for the utility of faculty load formula: the balance of activities within an individual faculty assignment and balance of assignment between faculty; the analysis required to assess current costs or to construct costs for planning; and for accountability in funding. A number of attempts have been made to develop formulas which take into account factors directed toward producing a more precise index as to faculty load. Moreover, while faculty load formulas have been promulgated over the years it seems safe to say that at the college level no formula for computing faculty load has enjoyed wide currency over any long period of time nor does any formula seem to enjoy widespread favor at present.[34] Health professions education seems to have ignored the subject altogether. Stickler[34] makes this concluding statement after reviewing a host of publications on the subject: ". . . only one conclusion seems to be fully substantiated: the total faculty load of a college or university teacher cannot be simply described nor easily measured."

It seems in this comment lies the key to the solution. Many studies have oversimplified the description of load, mainly from limited measures if any measures at all. The design of a load formula must include those elements generally perceived as faculty related activity, take into account appropriate weighting factors for each, and yet remain sufficiently uncluttered as a formula that potential users endorse its use.

The term "faculty load" includes the sum of all activities which take the time of a college or university teacher and which are related either directly or indirectly to his or her professional duties, responsibilities and interests.[34] Perhaps the most common measure of faculty load in institutions of higher learning has been the credit hour—semester or quarter. A presumption is made that there is some constant ratio between credit hour load and total faculty load. The discussion thus far indicates such a measure lacks completeness in many respects even though it enjoys common usage.

"Student credit hours" (SCH), another measure, is determined by multiplying the credit hours for a course by the number of students in the class. The sum of these figures for all classes taught gives the total student credit hours generated for a given teacher. This approach adds the element of class size. It has been said an average of 300 student credit hours per instructor constitutes a reasonable norm.[34] This figure has been used as a reference point in making instructional cost analyses.

"Student contact hours"—or "teaching clock hours"—is yet another way of measuring class load. This makes allowance for the extra time spent in courses as science laboratories. Different types of institutions have shown median load ranges from 14.4 to 18.2 student contact hours per week.[34] Junior colleges tend to exceed this and commonly consider 20-25 student contact hours per week to be a normal workload.

"Total clock hours" worked per week rather than credit hours or student contact hours is perhaps the best single index of faculty load; the major advantage is the inclusion of activities such as research and the whole spectrum of professional services in addition to teaching and its concomitant responsibilities.

Unit Systems

While total clock hours per week may offer the best single index of faculty load this statement gives little hint as to the application of this approach, especially when considering faculty load assignment. Various unit systems have been proposed as a means of dealing with the elements of load in some relative fashion so as to predict a total clock hour week from activities assigned. Such a system was reported by Howell[31] in 1962 pertaining to the Northern Illinois University. Differing point values were assigned for factors as undergraduate work taught, graduate work taught, each hour taught in extension, enrollments over a base of 30 in each class, advisees, committee participation, and holding office in a state or national organization.

A point system also was developed for use in the School of Nursing, University of Wisconsin-Milwaukee.[3] Utilizing the three broad categories of "teaching," "research" and "service," point values were assigned various activities as a means of achieving a relative weighting.

A comprehensive unit approach was developed for use at Colorado State University.[44] Termed the "comparative staffing unit" (CSU), these units quantified the direct instructional, related instructional and related professional activities of faculty members. The method measured estimated faculty input taking into account type of course, level of course, number of students per course and whether courses were initial or repeat sections. Student advising, committee assignments and related professional activities also specifically were recognized.

In short, the system allowed for the identification and quantification of significant activities in which faculty members are involved. A comparative staffing unit (CSU) is intended to measure the relative amount of professional input necessary to carry out a specific activity. By definition, a full-time university instructional faculty position consists of 1,000 CSUs (1,000 CSUs = 1.0 FTE). For example, should the individual components of a faculty member's workload add to 1200 CSUs, it would indicate an overload of 20 percent. For direct instructional activities, the basic unit of instructional workload is defined as one credit hour of lecture in a typical undergraduate course. Activities requiring less faculty input are assigned a lower workload factor; those requiring more faculty input are assigned a higher workload factor.

Formulary

The formula approach to measuring workload has been reported by several authors in the early 70s.[13,45,46,47,48,49] The formulas provide for the inclusion of factors as type of course, contact

class hours, duplicate courses, and number of students.

Wendel[45] presents a model for measuring workload. The overall formula appears within the ratio:

$$\frac{TA}{TA\%} = \frac{SR}{SR\%}$$

Teaching and advising (TA) is determined by use of specific formulas. TA percent and SR (service and research) percent are determined by calculating the percentage of time reported by faculty in those various duties; and SR is determined by solving for the unknown.

The formula for teaching load includes provisions for: a subject coefficient for each type of course, i.e., undergraduate, graduate, or skill; the number of hours spent in class; allowance for duplicate courses; and the number of students compared with a norm class of twenty students.

The formula is:

$$\text{Teaching} = SC\left(Hn - \frac{DUP}{10}\right) + \frac{(NSn - 20Hn)}{100}$$

The subject coefficient (SC) is 0.8 for skill courses in labs; 1.0 for undergraduate academic courses; and 1.2 for graduate courses. Hn represents the number of hours in class per week. DUP represents duplicate courses or sections, and NSn is the number of students.

Advising load is measured by a table of weighted factors for each advisory classification.* The number of advisees in each classification is multiplied by the designated load coefficient. These products are added and divided by five to provide the advisor load coefficient.

The formula for teaching (T) and advising (A) includes teaching load of all terms — fall, winter, spring and summer — plus advising load.

$$TA = T_f + T_W + T_S + T_{SS} + \frac{A}{5}$$

The service and research load coefficient can be obtained within the ratio:

$$\frac{TA}{TA\%} = \frac{SR}{SR\%}$$

Load indices for teaching and advising (TA) are computed by the process previously outlined. The other parts of the ratio, TA percent, SR and SR percent, are determined as follows:

1. Faculty members report the estimated hours per week for advising, instruction, preparation and grading, research and scholarly work, administration, faculty committees, and other types of activities.

2. The percentages of time spent on teaching/advising (TA) and in service/research (SR) are computed from the estimated number of hours reported in each case of the categories listed earlier (see footnote). These computations provide TA percent and SR percent.

3. Three parts of the formula are determined: TA by formula, and TA percent and SR percent by means of the data gathered on how time was spent.

4. The SR coefficient, or unknown, is then computed within the ratio.

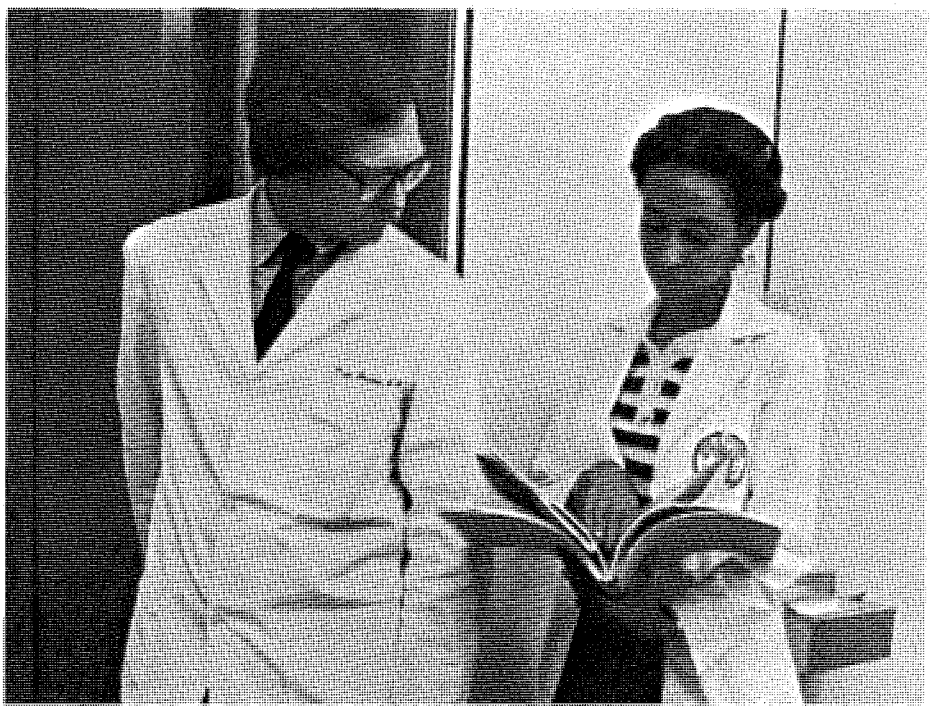
The end result produces indices for teaching, advising, service and research, and total load for each faculty member.

Archer[46] reports on formula developed at Virginia Western Community College in 1974. This formula is based on the concept of equated hours; the number of equated hours is computed by adding certain specified amounts to a workload data bank (B). These subsets relate to contact hours, credit hours, number of students, and number of class preparations. The system seems excessively complex as compared to others.

Adams[27] suggests certain modifications to a formula developed originally by Sexon[35] who had approached its design via an extensive study of time charts kept by teachers. The Adams's formula is expressed as follows:

$x + 0.7x + 0.03y$ = hours per week for classroom functions where x is contact hours (laboratory hours 2 for 1); 0.7 x is time for preparation; y is number of student hours produced; and 0.02 y is hours spent in evaluation.

Other time allocations are: 10 hours per week for research when approved by research committee; 10 hours per week for heading department; 6 hours per week for each course for independent study; 3 hours per week additional for each graduate course; 3 hours per week for each preparation beyond three; and 0.5 hours per week additional for each student teacher supervised.



"The design of a load formula must include those elements generally perceived as faculty related activity, take into account appropriate weighting factors for each, and yet remain sufficiently uncluttered as a formula that potential users endorse its use."

*Master's candidate with thesis 2.0; member of doctoral committee 0.5; chairman of a doctoral committee 1.5; advisor to doctoral student while writing 15.0; member of doctoral reading committee 2.5.

Parsons[48] reported in 1976 on a formula used at Golden West College. It uses five different variables thought to reflect the minimum number of principal parameters necessary to measure a teaching load:

$$\left[\frac{\frac{IH}{A}+\frac{NP}{B}+\frac{SE}{C}+\frac{OA}{D}-\frac{PA}{E}}{4}\right] \times 100 = \text{total teaching load in percent}$$

IH is weekly instruction hours; NP is different class preparations; SE is weekly-student contact hours (WSCH); OA is out-of-class assignments in hours/week; and PA is paraprofessional assistance provided. (Expressed as 0.08 x HRS or 2% per hour of instruction work credit subtracted from the total teaching load.)

A is the standard teaching load of 15 hours/week; B is the standard teaching load reference of five different class preparations/week; C is the standard teaching load reference of 500 WSCH.* (Found by multiplying the class enrollment by the number of weekly class hours and expressed as the sum of all classes; D is the standard teaching load reference of five hours/week of out-of-class duties (excludes office hours for student advising); and E is one in the equation.

Table 7 pictures five sample faculty with this system applied.

Other Approaches

Eagleton[49] reports on a workload formula that was developed by faculty at the Pennsylvania State University. Their formula blocks workload into teaching and advising; research and graduate study; service to university, profession and public; and scholarship and professional development, using weighted point values that indicate a total load for an entire semester.

Faculty workload has been ignored, in the main, by educators in the health professions. Holliman,[13] a nursing educator, does discuss a unique but straightforward approach to analyzing faculty workload. The end in view was to determine the need for additional faculty. Step one in this system is to establish time norms for an academic year.

Non-productive time,
in days/year/person
20 vacation
5 sick leave
104 weekends
14 holidays
143 total rounded to 140 days/year/person

Productive time,
in days/year/person
365–140 = 225 productive days

Step two is to calculate an individual teacher workload profile. This is accomplished by subtracting the time commitments per element within the assigned load from the productive days. For example, 5 days for continuing education, 9 days for committee work (6 hours/month), 5 days for annual faculty meeting and curriculum reviews. This gives a balance of days to be assigned to class/clinical/preparation time. The ratio for preparation is class 2:1 and clinical 1:3. A course that would meet for 23 class hours would be computed as consuming a faculty member's time as follows: 23 hours class + 46 hours preparation (23 x 2) for a total of 69. All such teaching time computations are totaled, converted to days by dividing by 8, and then subtracted from the productive time available. Load balances are thus achieved by juggling the assignments given and the productive days available, both expressed in days/year.

Still another approach to faculty load assignment expresses the various activities as a percent of total effort. While some hourly assumptions per activity must be made to arrive at assigned percent of effort, this system has the advantage of elasticity for the work-habit variations that tend to exist within any group of faculty. This particular methodology is currently employed within the College of Optometry, Pacific University. Not unlike the productive time approach of Holliman,[13] the first step is to compute the gross number of productive days available within the faculty contract period taking into account days dedicated to all university and college functions and holidays. Net productive days are then converted to net productive hours per contract period per faculty member. This number becomes the denominator constant for computing percent of effort per assigned activity. Teaching activities are determined using the following subformula:

Total time for lecture/seminar classes = contact hours x 3 (allows 2 for 1 preparation time); total time for laboratory classes = contact hours x 1.5 (allows ½ for 1 preparation time); total time for clinical supervision = contact hours; and total time for thesis supervision = 2 hours/week of thesis course enrollment.

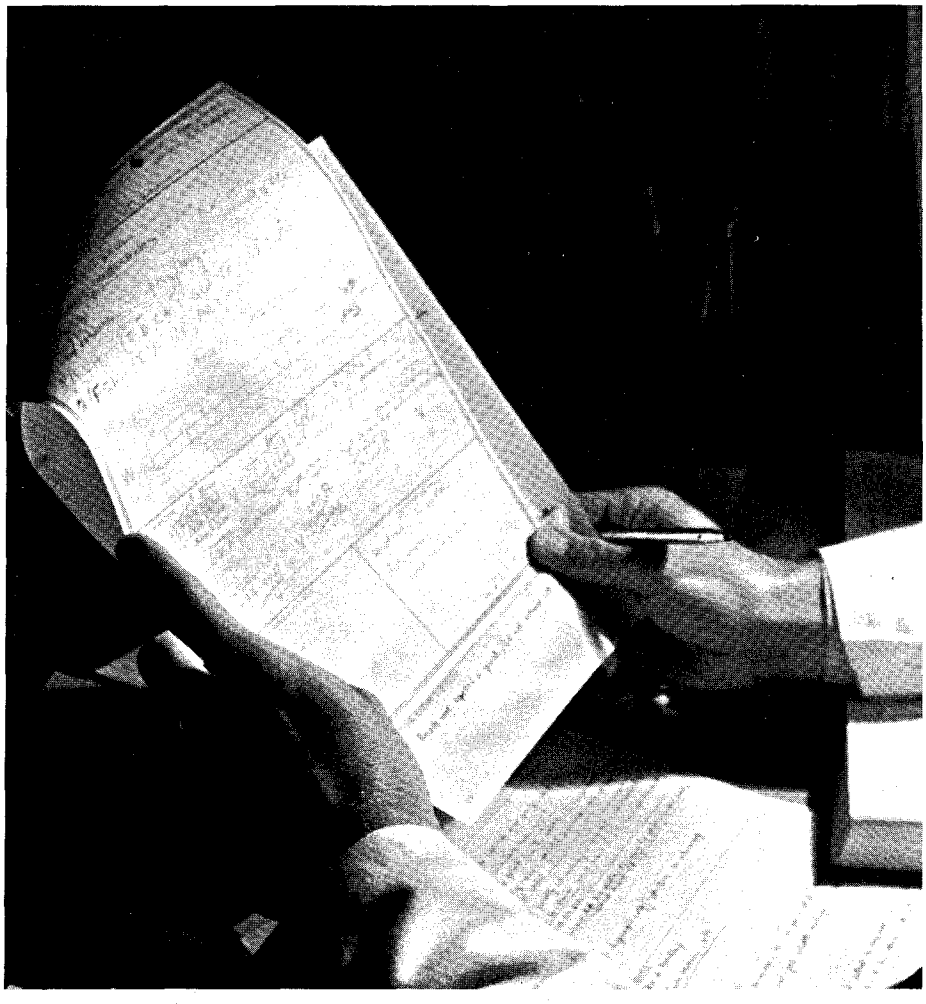
*Reference standard obtained by using a typical class enrollment figure of no less than 32 nor more than 35 students enrolled as a nominal value. WSCH is weekly student contact hours.

TABLE 7
An Example of the Work Load of Five Faculty Using System Employed by Golden West College (Health Sciences)

Faculty Member	Instruction Hours/Week	IH / 15	Number of Preparations	NP / 5	Weekly Student Contact Hrs.	WSCH / 500	Outside Assignments	Hrs./Week / 5	Para-professional Assistance	Total Load Factor in Percent
A	17.25	1.15	4.5	0.90	545	1.09	4	0.80	0	98.50
B	17.25	1.15	3.5	0.70	672	1.34	7.5	1.50	-0.64	101.25
C	8.88	0.59	1.67	0.33	601	1.20	8.0	1.60	0	93.05
D	13.0	0.87	3.5	0.70	428	0.86	12.25	2.45	0.52	109.00
E	21.25	1.42	1.75	0.35	772	1.54	4.5	0.90	-0.10	102.85

Each of these subfigures becomes the numerator for the percent of effort in each activity. A blanket amount of 3% is set aside for each faculty member for university service activities such as committee and faculty meetings. Also a blanket amount of 17% is assigned for personal growth activities. The balance of time in percent is assigned to scholarly development. Each faculty member is expected to file an activity plan with the dean indicating how he or she plans to satisfy this area of their total faculty load. These plans are evaluated and updated annually.

Many of these approaches, including the last described, lend themselves to the generation of management data. A chart that includes each faculty member by activity can be constructed enabling computation of composite college, divisional or departmental effort per activity. In other words, it becomes possible to compute total FTE faculty effort dedicated to each of scheduled teaching, thesis advising, clinic supervision and scholarly development. Of course, equalizing of load per faculty member can, as easily, be accomplished.



"In framing the major broad elements of faculty load the basic guide is the mission of the institution. Large multi-university, research-oriented institutions have demonstrated the largest commitment to research, while community colleges have demonstrated the least."

Concluding Comments

As a means of summarizing findings of the literature on faculty workload, a series of statements follow that might be regarded as "load laws."

1. In framing the major broad elements of faculty load the basic guide is the mission of the institution. Large multi-university, research-oriented institutions have demonstrated the largest commitment to research, while community colleges have demonstrated the least. The health professions schools generally place somewhat lesser emphasis on research but greater emphasis on public service and professional development than the research oriented institutions within higher education in general. Consequently the load of any particular individual faculty member will tend to be a reflection of institutional mission.

2. Hours per week spent in research activity by any individual faculty are primarily a function of the academic area and individual interest rather than the release-from-teaching-time provided. Faculty in investigative and realistic areas spend the most time in research; the fewest hours are spent by faculty in the social and artistic areas. As to faculty in health professions schools, basic science faculty may spend twice the time at research than do faculty in the clinical sciences.

3. In general, most faculty report a 50 to 55 hour week. The total hourly work week is not a factor of academic rank or level of instruction.

4. Preparation and evaluation time required for course work is not a function of level of instruction but is a function of method of instruction and also subject matter. About 1.6 preparation/administration hours per week per credit hour are required to lecture, recitation/discussion and seminar methods, and 1.3 preparation/administration hours per week per credit hour are required for laboratory instruction. Independent study/tutorial methods require 0.75 preparation/administrator hours per week per credit hour. Subject coefficients (multipliers) are sometimes employed as a means of establishing balance between those academic areas that require greater time in preparation of material.

5. The design of a load formula must include those elements generally perceived as faculty related activity, must take into account appropriate weighting factors for each, and yet remain sufficiently uncluttered as a formula that potential users endorse its use.

Aside from essential managerial information realized from faculty load studies, there exist two underlying fundamental principles: that equity is important—equity among individual faculty members, among departments and among institutions; and that there is a relationship between workload and the quality of education. □

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ASCO ANNUAL REPORT 1981-1982

Over the past year, a great deal has been accomplished to enhance the quality and state of optometric education through the association. A move to new office space in September, the purchase of a Wang word processor and printer, along with expanded capabilities for additional membership and revenue sources have provided significant steps toward allowing expansion of services and programs which will benefit the ASCO member institutions.

Three new schools of optometry added over the past three years now bring the total number of schools to 18. These include 15 in the U.S., two in Canada, and one in Puerto Rico. More than 1,100 students now graduate yearly with a total enrollment approaching 5,000. Nearly three-fourths of the entering class in 1980-81 had four or more years of prior college work and a mean grade point average of 3.28.

In spite of this growth in quantity and quality, however, the dramatic decline in the applicant pool for all health professions schools continues to threaten the institutions' financial livelihood, as well as the nation's resource of health care providers. More specifically, however, it seriously threatens the stability of the optometric profession in being able to graduate enough O.D.'s to replace the high attrition of practitioners expected over the next decade.

This year began with a concerted effort toward implementing five goals adopted by the association in 1981 which were intended to guide program planning through 1983. These included production of an adequate supply of student applicants, development of personnel and training programs for optometric educators and administrators, and development of management data information relative to optometric education. All activities conducted during 1981-82 moved these three projects to well within completion during the 1982-83 work year.

Two other goals, however—identification of funding sources for optometric education, and the education of higher education, government, other professions and the public about the general nature of optometric education —have only received preliminary attention. It is hoped that these two areas will receive greater emphasis during the coming year.

Goals: Student Recruitment

Recruitment Activities

The Council on Student Affairs (CSA) has continued rigorous activities in the areas of student recruitment over the past year. Meeting with the AOA Division of Education and Manpower in St. Louis in October, the council's Project Team on Student Recruitment set specific goals and priorities for the year's recruitment projects. Target states were determined using current manpower distribution and population data, and a model student recruitment program was developed and utilized in Texas. Several national career guidance materials also were reviewed and updated, and a national recruitment poster was designed and produced and will be distributed during the summer of 1982.

In addition to these recruitment efforts, relationships with national organizations representing students and health advisors were strengthened during the year. CSA representatives met with the American Optometric Student Association (AOSA) leadership in January to discuss common goals and concerns, and regional and national meetings of health advisors included optometry program involvement. In addition, ASCO provided a grant for continued financial support to the National Association of Advisors in the Health Professions (NAAHP).

The OCAT applicant figures point up the continuing challenge in the recruitment area. OCAT applications for the last three academic years are as follows:

1979-80	2,701
1980-81	2,334
1981-82	2,036

A recruitment management seminar held in Kansas City during the year was attended by 24 admissions officers and staff representing fourteen of the schools. It is hoped that the ideas gleaned from this seminar further will help the schools modernize and streamline local admissions efforts and that national recruitment efforts will help stem this declining applicant tide.

Financial Assistance

In addition to recruitment activities, the Council on Student Affairs developed and submitted a plan for optimum use of the ASCO Student Endowment Fund, established last year from a gift to the association. The plan provides for distribution of the fund's investment return to be used solely for the financial assistance of optometry students. The funds will be distributed to each active and provisional member institution of ASCO on a per capita basis, with the individual schools being responsible for developing and implementing internal policies and procedures for the disbursement and accounting of the funds.

Also during the year, ASCO contributed $2,500 to the United Student Aid Fund (USAF) from funds accrued from the ASCO Student Endowment Fund. The USAF provides an additional source of student financial assistance for optometry students.

A student indebtedness survey completed during the year will assist in providing a more accurate accounting of the incurred debts of optometry graduates. This project received 100 percent participation from within the privately funded schools and partial participation of schools under public control. The data will be used to establish levels of grant and loan need for various governmental agencies.

Goals: Personnel Development

Faculty and Curriculum Development

A faculty development workshop planned and carried out by the Council on Academic Affairs (CAA) in December, 1981, was attended by over forty faculty members and administrators representing eight optometric institutions. The workshop focused on a number of topics, including the integration of course outlines and behavioral objectives, techniques of measurement and evaluation, clinical competency evaluation, and other innovative teaching strategies.

Initial planning also took place under a second CAA project for a personnel needs inventory among the schools and colleges of optometry to forecast faculty and administrative needs of optometric institutions to the year 2000. In addition, work began on the determination of educational resources for the development of personnel within optometric education.

Another project—a study of the common core curriculum among the schools of optometry—also is being conducted by the CAA. Roughly one-third of the member institutions have participated to date, and the majority have indicated they plan to participate. This promises to be the most thorough and detailed study of the curriculum within optometric education. Its usefulness will extend from intracurricular review within the member schools to describing a national common curriculum to becoming the basis for a topical outline for examining boards.

Dr. Leslie V. Woods of Barnes-Hind Pleases International welcomes 1001, guests and others at the ASCO luncheon/symposium held during the 85th AOA Congress in Boston in June.

Goals: Management Data Information

Future Planning

Clinical Data Base

One of the basic needs within optometric education has been the requirement to describe clinical activity in a consistent manner within optometry. This information is needed both from a patient delivery standpoint and an educational resource standpoint. Over the past year, the Council on Institutional Affairs (CIA) has continued work on the development of a standardized data base for optometric education to be used for educational research, clinical, and management purposes. A thorough literature review has been conducted with various protocol systems being designed to create compatibility with the various data processing approaches utilized in some of the schools and colleges today. Well started into the first year, this project is expected to be better realized during the upcoming year of activity.

Julie Demuren, ASCO liaison from the American Optometric Student Association (AOSA), discusses student issues and concerns at the ASCO Annual Meeting in June.

AOA Planning Session

ASCO participated in the American Optometric Association's (AOA) meeting and planning session held in San Antonio. ASCO President Dr. Willard B. Bleything and Executive Director Lee W. Smith participated in discussions with the AOA Division of Education and Manpower in their planning and made a presentation to the AOA Inter Association Task Force to describe ASCO relationships and contacts with other organizations.

ASCO also will be cooperating with the Department of Health and Human Services (DHHS) in the upcoming year, along with other members of FASHP, to establish a new health professions student award program. This program will recognize students who develop proposals in disease prevention and health promotion. The program is to be implemented this coming year.

Long-Range Study

A proposal for a long-range study of optometry and optometric education has been launched over the past year in conjunction with the American Optometric Association (AOA). The proposal developed by a combined AOA/ASCO committee is being sponsored by the American Council on Education to a number of private foundations in an attempt to find necessary funding for the study. While contacts to date have not been very successful, discussions continue with at least three major foundations, and there is every expectation that appropriate funding will be found for the study.

New Academic Appointments

Over the past year, the following changes in academic administration have taken place. Dr. Boyd B. Banwell was appointed president of the Illinois College of Optometry following the resignation of Dr. Alfred A. Rosenbloom, Jr., after ten years as ICO's president. In addition, Dr. Arthur A. Afanador was appointed dean of the School of Optometry at Inter American University of Puerto Rico. Dr. Henry W. Hofstetter, who previously served as acting dean at Inter American University, returned as Rudy professor emeritus at Indiana University School of Optometry. Dr. Larry R. Clausen, formerly of Pacific University College of Optometry has been appointed dean of academic affairs at New England College of Optometry.

Members of the AOA State Legislative Affairs Advisory Committee address ASCO members and guests on the concept of primary care at the ASCO Annual Meeting.

ASCO Central Administration

Legislation and Appropriations

This has been a difficult year in dealing with Congress. There has been little or no new legislation of direct impact on optometric education. However, ASCO has been actively involved in responding to major attempts to reduce health professions education and general appropriations which proposed reduction of available loans, scholarships and other support programs for optometry students. It appears, at this time, that efforts have been successful in influencing the Congress to retain eligibility of professional students for loans under the Guaranteed Student Loan (GSL) program, and that some level of funding of the capital fund for Health Professions Student Loans (HPSL), and a limited amount of funds for "special projects" have been retained. All of these at one time were proposed for termination.

The ASCO National Office also provided support for students of optometry participating in a student march on Washington day March 1. Some forty optometry students joined the national association of students in Washington, D.C., to visit congressional offices to encourage continued support for programs providing student loans and scholarships. ASCO cooperated by contacting some twenty key congressional offices for visitation arrangements and preparing a one-page summary statement of student assistance issues for distribution to the congressmen.

HRA Contract

In September, 1981, ASCO was awarded a contract by the Health Resources Administration, Department of Health and Human Services, to conduct a follow-up study of optometry graduates to determine practice patterns and licensure experiences. The contract, valued at about $120,000, will last for an eighteen-month period and has a target date for completion of March 30, 1983. Utilizing a number of consultants headed by Dr. Penelope Kegel-Flom of the University of Houston College of Optometry, a preliminary questionnaire has been submitted to the Health Resources Administration for approval. It is anticipated that the questionnaire will be distributed to the survey group some time during the summer of 1982. Dr. Robert Bleimann has been employed by ASCO on a full-time basis to manage the project, and a part-time research assistant also has been employed.

Panelists (l to r) Robert Heaney, M.D., of Creighton University; J. Stephen Smith, Ph.D., of the University of Alabama in Birmingham; and Frederick Hebeard, O.D., Ph.D., Ohio State University, answered questions concerning their academic health center programs at the ASCO symposium/luncheon held during this year's Annual Meeting.

New Member Sections

At the ASCO annual meeting in June, 1981, the association approved three new membership categories which provide for sectional membership in the following areas: (1) *sustaining member section*—manufacturers and distributors of ophthalmic and related equipment and supplies; (2) *paraoptometric education section*—accredited institutions which offer programs in the education of paraoptometric personnel; and (3) *non-profit agency section*—non-profit agencies or institutions which carry out an affiliated optometric education program with an active member of the association. Eligible organizations may affiliate with the association upon petition to the executive committee and upon a two-thirds majority vote of the board of directors.

During the past year, draft application forms and introductory materials have been developed for review and approval for the new memberships. It is hoped that about ten to fifteen sustaining members can be elicited for the association during the coming year.

Meeting Sessions

During the year, the association participated in two meetings of the Association of Academic Health Centers, the American Optometric Association mid-year meeting and the tripartite meeting of the IAB, NBEO, and ASCO.

In addition to nearly monthly meetings of the Federation of Associations of Schools of the Health Professions (FASHP), ASCO was represented at the AOSA Congress, national meetings of the National Association of Advisors in the Health Professions and a Veterans Administration workshop on residency stipend levels. In this atypical budget year ASCO has met frequently with the Coalition for Health Funding which has carried a significant load in influencing the health budget in the House and Senate.

Journal Report

The *Journal of Optometric Education* continues on a solid footing this year with an ample backlog of manuscripts for publication, positive feedback from our readers, a steady base of subscriptions and distribution, and another award for "Best National Optometric Journal." The major problem that still impedes further progress and expansion is obtaining a sufficient advertising base to help underwrite some of the *Journal*'s costs.

Editorial Content

Four issues were published during the past year containing a total of 19 papers and reports. Fifteen of these were original papers, and four were ASCO or staff-prepared reports. The issues highlighted four topics of concern and interest: (1) accreditation and credentialing; (2) clinical competence measurement in optometry; (3) quality assurance in off-campus clinical training programs; and (4) geriatric and rehabilitative optometry.

Papers on continuing education, test construction, and a profile of the new Inter American University of Puerto Rico, School of Optometry, were highlighted, as well as the ASCO Annual Report, a summary of the *COE Annual Survey of Optometric Educational Institutions*, a condensed report on the ASCO developed educational plan for rehabilitative optometry, and results of JOE's Reader Survey.

In addition to the above papers and reports, two other significant communications were published: "A Primary Health Care Model" by Dr. William R. Baldwin and the "Future of Optometric Education" by Dr. Henry B. Peters. Also, a new column entitled "NEI Report," was added which will review information about the National Eye Institute, including latest developments, research priorities, grant development tips, listings of awards and proposals funded, and other information.

Once again, the *Journal* continues on a timely publication schedule with a one-year lead time on manuscripts available for publication. Fifteen papers are in various stages of review and revision for publication during 1982-83.

Index Medicus

In November, 1981, the *Journal* received notification concerning its reapplication for inclusion in *Index Medicus*. Ninety-five journals had been evaluated for *Index Medicus*, and 23 had been selected; JOE was not one of those accepted at this time. The reason given was the same as noted upon previous application: that the *Journal* was less needed by the user community served by *Index Medicus* than those journals currently being indexed. It further was noted that reapplication could be made after a two-year interval. It is the *Journal*'s intention to reapply for inclusion after the stated two-year period.

Distribution and Subscriptions

In addition to the annual review and update of the JOE mailing list, the mailing list was converted to the WANG word processor this past year. Mailing labels now can be printed directly from three lists which will greatly facilitate preparation of bulk mailings. In addition, billings, renewal notices, and additions, corrections or deletions to the mailing list can be made in a much more efficient, effective manner.

With the steady rise in production and mailing costs for the *Journal*, serious consideration also is being given to raising the annual subscription rate. Further study will be made of JOE costs during the next year, and a notice of an increase in the annual subscription rate may be forthcoming.

Reader Survey

The results of the Reader Survey conducted in April, 1981, were published in the spring issue of JOE. These showed a high rating of overall quality, writing ability, and use of photographs and illustrations in JOE. In addition, 56% of the readership ranked JOE third in the top five publications most important for them to read. The survey also indicated that an average of 2.5 persons reads each copy of JOE. This means that the effective circulation of JOE is about 4,000.

The survey also pointed out, however, that students comprise only about 5% of JOE's total readership. Because of this, an effort has been made to make additional copies of JOE available in bulk quantities to the schools to be distributed particularly to the students and as otherwise desired.

Summary

In conclusion, this has been a year of increasing strength and support for the *Journal*. We have continued to generate a steady flow of manuscripts and have received positive recognition that the *Journal* is providing a valuable, effective communication tool for optometric education. Our major concern and concentration of effort in the near future will be to continue to try to offset some of the JOE costs by gaining increasing advertising income. At the same time, we intend to continue publishing a professional, high quality, award-winning educational journal for the profession. □

William D. Dansby (right), outgoing president of the Optometric Editor's Association (OEA) presents JOE's "Best Journal" award to Harriet Long, managing editor, at OEA's annual meeting in June.

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8001 Natural Bridge Road
St. Louis, Missouri 63121

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3333 Queen Mary Road #350
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Memphis, Tennessee 92631

University of Waterloo
School of Optometry
Faculty of Sciences
Waterloo, Ontario, Canada N2L 3G1

ASSOCIATION OF SCHOOLS AND COLLEGES OF OPTOMETRY, INC.

FINANCIAL STATEMENT

June 30, 1982
(UNAUDITED)

ASSETS			
Cash Checking			$ 1,172.31
Intercapital Liquid Asset Fund			125,613.45
Furn., Fixtures & Equipment	$11,118.40		
Less Accum. Dep.	3,861.51		7,256.89
Automobile	9,859.52		
Less Accum. Dep.	2,464.00		7,395.52
A/R from Gov't Contract-Expenses			93.06
Prepaid Insurance			394.50
TOTAL ASSETS			$141,925.73
LIABILITIES AND FUND BALANCE			
Payroll Taxes Payable		$	110.63
A/P Student Endowment Fund			.28
Fund Balance			141,814.82
TOTAL LIABILITIES AND FUND BALANCE			$141,925.73

About the Association

The Association of Schools and Colleges of Optometry (ASCO) is a non-profit, tax-exempt professional educational association representing the professional programs of optometric education in the United States and Canada. Continuously training nearly 4,000 students, the schools now graduate upward of 1,000 qualified doctors of optometry per year.

ASCO incorporated in 1972 and established a National Office in 1974. The National Office provides a wide range of services to the schools and represents optometric education to the public and the health community. In addition, it maintains cognizance over legislative and national affairs and provides counsel and comment to policies and programs affecting optometric education.

The association has established three major councils in the areas of Academic Affairs, Student Affairs and Institutional Affairs. These councils review and recommend policy decisions concerning issues of importance to the Board of Directors. In addition, they maintain ongoing activities in their respective areas of responsibility.

In 1975, ASCO spearheaded the publication of the *Journal of Optometric Education*. Now entering its eighth year of publication, the *Journal* is the only publication in the U.S. today devoted entirely to the educational concerns of the profession.

Headquarters

Association of Schools and Colleges of Optometry
6110 Executive Boulevard
Suite 410
Washington, D.C. 20852
(301) 984-4406

National Office Staff

Lee W. Smith, M.P.H., Executive Director

Harriet E. Long, Assistant to the Executive Director and Managing Editor, *Journal of Optometric Education*

Charlotte M. Ahrendts, Secretary to the Executive Director

Lee W. Smith

Keeping Up with People...

(continued)

lege of Optometry (SCCO) are **Robert O. Dundas, O.D., Chris T. Tasulis, Jr., O.D., Richard F. Fixa,** and **James O. Perez.**

Dr. Louis J. Katz, Illinois College of Optometry (ICO) Alumni Council vice president, has been awarded the community service award by the Chicano Federation of San Diego County. Two ICO faculty members recently promoted from assistant professors to associate professors with contract tenure are **Dr. Janice Jurkus,** chairman of the division of optometric sciences, and **Dr. Gary Porter,** chairman of the division of basic sciences. The ICO Board of Trustees also created a professor emeritus position on the ICO faculty and named **Dr. E.R. Tennant** to the honor effective upon his retirement June 1, 1982.

Dr. Alfred A. Rosenbloom, Jr., former president of ICO, began an administrative sabbatical leave June 30 for one year, and has been invited to head a Symposium on Optometric Education in Manila and Cebu, Philippines, in July following the 4th Asian-Pacific Optometric Congress.

Dr. Robert N. Kleinstein, associate professor of optometry and public health and assistant professor of physiological optics, has been named chairman of the Department of Optometry at the University of Alabama in Birmingham (UAB) School of Optometry.

The dean of the UAB School of Optometry, **Dr. Henry B. Peters,** has been named Optometrist of the South by the Southern Council of Optometrists. **Dr. Terry L. Hickey,** UAB associate professor of physiological optics, has been appointed a member of the Vision Research Program Committee (VRPC), advisory to the National Eye Institute and the National Advisory Eye Council, for four years. **Dr. Jimmy D. Bartlett,** associate professor of optometry at UAB, has been appointed abstracts editor for the *Journal of the American Optometric Association.*

A $3,000 research grant from the Auxiliary to the American Optometric Association was awarded to **Drs. Anthony J. Adams** and **Kenneth A. Polse** of the University of California, Berkeley, School of Optometry, for their project, "Visual and Ocular Side Effects of Radial Keratotomy." In addition, **Drs. Arkady Selenow** and **Kenneth J. Ciuffreda** of the State University of New York, State College of Optometry, received a $3,000 research grant for their project, "Vergence in Infants at Risk of Becoming Strabismic," and **Steven M. Mathews, O.D.,** received a $3,000 fellowship in support of his Ph.D. candidacy in vision science at the SUNY College of Optometry. □

Marilyn Hinkle (left), 1981-82 education-research trustee, presents the Auxiliary to the American Optometric Association's annual educational grants to (l to r) Elwin Marg, Ph.D. (accepting for Drs. Anthony Adams and Kenneth Polse); Jerome Sherman, O.D. (accepting for Drs. Arkady Selenow and Kenneth Ciuffreda); and Steven Matthews, O.D.

4th International Symposium On Contact Lenses

Quebec Optometric Association
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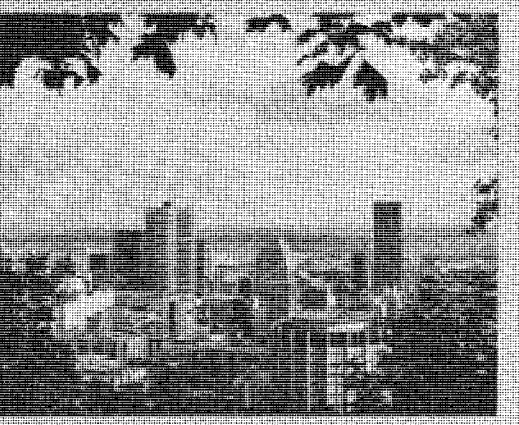

TOPICS:

- Extended wear,
- Orthokeratology,
- Toric soft contact lenses,
- Radial keratotomy,
- Bifocal soft contact lenses,
- New and future in contact lenses, etc...
- Corneal vascularisation and contact lenses etc...

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Dr VINCENT POTTS, O.D.
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RICHARD M. HILL, O.D.
Ohio
NED PAIGE, O.D.
Ontario
NEAL J. BAILEY, O.D.
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H. WALTERS, O.D.
KLAUS VOERSTE, O.D.
Germany

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- EXHIBITS
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