Establishing criteria for measuring faculty members' workload

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Abstract

Purpose: This article presents the results of a study aimed at devising comprehensive, standard and objective criteria for measuring faculty members' workload.

Material and method: The indicators for measuring faculty members' workload were collected through a comprehensive review of the literature, a survey of the available documents and methods for measuring workload in the country, and interviews with health authorities and faculty members. In all, 81 indicators were identified which fell under 5 categories: instruction; research; consultancy and academic services; administrative and managerial services; and personal and professional development.

A questionnaire using these 81 indicators was designed and randomly mailed to 120 faculty members of Iran University of Medical Sciences and Health Services working in six faculties. They were asked to rate each question using a seven scale response, from complete disagreement to complete agreement. 98 faculty members responded, that is, 15% of all the faculty members of the university. All the indicators were ranked according to the scores received in the questionnaires.

Results: 81 indicators were identified and weighted. The faculty members suggested

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that 25 more indicators needed to be added to the list. The category of instruction, with 32 indicators, was regarded as the most important category. Teaching a new course, preparation time for class and number of students in the class, were considered to be as important as the other instructional indicators. The weighting given to each indicator was influenced by the specialty of the rater. Faculty members believe the workload data should be reported by themselves preferably at the end of every academic year or semester.

Discussion and conclusion: The criteria and the guidelines suggested in this study might be useful for evaluation, accreditation, ranking, promotion, tenure decisions, policy making and improving the quality of education in medical universities.

Each department or faculty needs to have their own specific indicators weighted by their faculty members. This provides consistency and stability in workload data collection. The indicators for professional development also need to be considered in measuring faculty workload.

Keywords workload, faculty member, medical,

Introduction

An appropriate and accurate measurement of faculty members workload will be of benefit to the universities. It provides the grounds for the university authorities to decide on a fair allocation of resources among faculty members, to establish a sound system for professional and financial rewards and incentives and to design strategic planning. Such a measurement may not be possible unless standard, consistent, objective and measurable indicators of faculty members' workload are identified and prioritized (Reshadatjo 2001).

There are two predominant methods used for measuring workload: the activity reporting and the equivalence report (Jordan 1994). In the activity reporting method, faculty members report the time they have spent on each specific indicator provided by the university. Thus, similar to a questionnaire, against each indicator, faculty members write down the time spent on that during a week or a month.

The equivalence report is based on weighting the activities employing a credit hour standard to the institution. Thus one hour of teaching may be regarded as three credits and one hour of supervision as one credit. The sum of all the credits the faculty member receives is regarded as his/her workload measurement (Jordan 1994). However Jordan does not show how an institution decides on the amount of credits or weight for each indicator.

Archer (1974), while supporting the weighting formulae for measuring workload, states that the classification of faculty members workload would depend on which formula was used. Thus Archer suggests that the feasibility of the formulae should be determined.

Byrd (1994) argues that since the amount of time allocated to each indicator depends on the goal and the mission of the institute, the weighting system used for measuring faculty members workload should also be defined based on the goal and the mission of the institute. Byrd suggests that departments should be regarded as the unit of reporting, not the individual faculty member.

Meyer (1998) criticizing equating teaching with managerial and administrative

responsibilities, suggests that workload studies should be focusing on students' learning, defining outputs, clarifying curricula and missions, realizing the potential of technology, realigning rewards for research and teaching, and encouraging new leaders and fresh ideas. Mancing (1994) also suggests that workload should be considered in the context of institutional mission and workload standards.

Shaheed Beheshti University of Medical Sciences and Health Services (UMSH) embraces a more encompassing definition of faculty members' workload so that a variety of different indicators are considered for measuring workload. In mid 2001, the advisory committee of Shaheed Beheshti UMSHS approved the faculty members' workload equivalent report plan. In that, 12 indicators under three components: education, research and service were identified and weighted. Each component and indicator was clearly defined. The indicators were further divided into more detailed sub-indicators. The basis for the weighting system, however, is not very clear and also similar weighting is given to all departments.

Iran UMSHS follows a self-report method which is then analyzed and weighted by certain faculty members appointed by the Vice Chancellor for Education. Each indicator receives a credit. The sum of the credits for teaching is regarded to be 13, for professional development 7, for research activities and publications 20, for managerial services 5. The faculty members are also evaluated by the students and the head of the department for the quality of the educational services they are providing. 35 credits is assigned to students' opinions and 25 for the head of the department. Iran UMSHS probably is the only university that assigns credit to the quality of education.

The present study was devised to establish more comprehensive and detailed indicators that need to be taken into account when measuring workload in order to ascertain with greater accuracy nature of the tasks involved. In addition, the study was set up to determine the type of weighting which should be given to each indicator.

Method

This is a descriptive study conducted in six faculties of Iran UMSHS. A questionnaire was designed incorporating the indicators identified as relevant and the faculty members were asked to express their degree of agreement about each indicator through the use of a seven-scale response ranging from complete agreement to complete disagreement.

The indicators were collected in four stages. Stage one was a comparative review of the literature for identifying the criteria for indicators. The indicators were collected from the workload studies conducted in other universities such as Kent University (Greer & Myron) Pennsylvania State University's Behrend College (Shull 1984), Shaheed Beheshti UMSHS's internal report, Iran UMSHS's internal report, the documents in the Iranian Ministry Of Health, Treatment and Medical Education.

Stage two consisted of interviewing certain academic members in Shaheed Beheshti UMSHS, Iran UMSHS and certain authorities in the ministry and seeking their opinions regarding which indicators should be used for evaluating workload. While the interviewees approved the indicators from

the first stage, they recommended that 15 indicators be added to the list.

In stage three, the 81 indicators derived from the previous two stages were classified and organized in a questionnaire format.

Stage four was testing the validity and reliability of the questionnaire. The validity of the questionnaire was tested by ten experts in education and medical education. The reliability of the questionnaire was checked by using the alpha Kronbach test.

The questionnaires were mailed to120 members of the 629 faculty members of Iran UMSHS, randomly selected from six faculties. 98 faculty members responded. The participants recorded their response to the indicators. The participants were asked to indicate whether the question (indicator) was irrelevant. The participants were also asked to add any indicator that was missing in the questionnaire.

Since the weighting given to each indicator might change from field to field, the respondents were allocated to three groups: 57 clinicians, 15 non-clinicians and 26 technicians. Clinicians were defined as those who were involved in the teaching of clinical courses in the hospitals. Non-clinicians were those who taught basic sciences and management. The technicians were defined as those who worked in the laboratories, nurses, obstetrics, physiotherapists, and so on.

Data analysis

In order to prioritize the indicators and make the comparison between them easier, the data were changed into percentages using the following procedure. Since each indicator was graded based on scale of seven, the sum of the numbers assigned to each indicator is regarded as the score for that indicator. The score of an indicator is divided by its highest score which is calculated by the number of participants multiplied by seven, since seven is the highest number one can mark for an indicator. The result then is multiplied 100.

$$\frac{\text{Sum of the scores}}{\text{Number of participants} \times 7} \times 100$$

Results

There are 81 indicators classified under 5 categories: instruction; research; consultancy and academic services; administrative and managerial services; and personal and professional development

Instruction. The weighting given to instruction at different stages from undergraduate to post graduate is as follows:

Clinical specialty	85
Ph.D.	76
General practice (Undergraduate)	74
Master of Science	72
Bachelor of Science	65
University diploma	48

The clinicians weighted the relevant teaching indicators as follow:

Teaching in the hospital	90
Teaching in the clinical rounds	88
Teaching in the morning reports	84
Journal club	83
Teaching in the operating room	77
Teaching in the procedure room	75
C.P.C. conferences	72
Mortality conferences	68

All three groups weighted the relevant theoretical teaching indicators as shown in table 1.

As shown in table 1, Clinicians have weighted clinical teaching much higher than non-clinicians and have weighted the laboratory courses much lower than the weighting given to these by the technicians.

Table 1. Comparison between the three groups. C stands for clinical, NC non-clinical and T for technical.

Type of Teaching	C	NC	T	All
Clinical courses	93	31	90	93
Main courses	84	90	96	89
Managing the educational fields	75	66	75	80
Laboratory courses	38	53	60	73
General courses	55	75	55	64
Teaching one student	46	57	55	60

All the participants weighted the following relevant indicators as:

Teaching a new lesson/course	84
Preparation time for the class	78
Teaching large classes	77
Marking papers	72
Teaching in another/far site	66
Time spent in reaching the place of teaching	59

Indicators related to supervision are weighted as follow:

Supervising a thesis	86
Being a consultant for a thesis	74
Being an examiner	65

The participants recommended that certain indicators (in the space provided for them in the questionnaire) needed to be prioritized and considered in workload studies. They are as follow:

Teaching in the workshops for faculty members
Designing and conducting workshops for faculty members
Teaching in post specialty or fellowship
Teaching the public/community

Research. The second category, which consists of seven indicators was weighted as folllows::

Authorship of a book	93
Publishing articles	92
Main researcher of accepted research proposals	91
Translation and authorship of a book	85
Translation of a book	81
Co-researcher	79
Research consultant	76

The other indicators recommended by the participants are:

Peer review of research proposals
Peer review of books
Peer review of articles
Editor of a journal
Director of a conference
Review articles
Case reports
Editorial board

Consultancy and academic services. There are 13 indicators related to consultancies and academic services which were weighted as follow:

Presentation	88
Consultant on university projects	82
Consultant for special educational workshops	81
Consultant for projects outside the university	75
Consultant for team work students' projects	74
Community consultant	73
Consultant for students in the community	73
Consultant for students' projects	72
Consultant for graduates	64
Consultant in technical affairs, maintaining students' records	63
Consultant for students in their general affairs	60
Free consultancy and general academic services	60
Recommendations	53

The eight indicators recommended by the participants are as follow:

Membership of the evaluation committee of the ministry
Membership of the higher council of curriculum development
International presentation of papers
Presentations in seminars
Poster presentation in seminars
WHO consultant
UNICEF consultant

Administrative and managerial services. There are 13 indicators in this category which are as follow:

Chancellor of the university	89
Vice chancellor	87
Dean of the school	87
Dean associate	84
Managers	83
Hospital director	82
Administrative manager	80
Hospital associate director	78
Head nurses	76
Head of the educational department	75
Head of the ward	74
Membership in the committees	68

The recommended indicators are as follow:

Membership in university educational council
Membership in faculty educational council
Membership in university research committee
Head of a clinic
Membership in faculty research committee
Production editor

Personal and Professional development. The indicators are as follow:

Innovations	89
Critics of journals, research proposals and reports	88
Inventions	88
Study in a special area or subject	87
Discoveries	87
Membership of a scientific society	83
Participation in professional and technical meetings	82
Participation in educational workshops	79

The participants weighted the five categories as follow:

Teaching	95
Research	85
Professional development	83
Academic consultant	75
Administrative and managerial services	69

The participants' views regarding a proper time for measuring workload were as follow:

At the end of academic semester	77
At the end of academic year	75

Monthly	43
Weekly	37

Conclusion

The fact that clinicians weighted laboratory courses much lower than technicians suggests that the weight given to each indicator depends on the field and specialty of the rater. Thus it is suggested that the indicators should be weighted at the level of each department or faculty. The comparison between the workload data obtained from one department with another department may not be realistic unless each indicator is weighted by the faculty members of that department. This will result in providing stable and fixed criteria for measuring the workload of that department or school. Therefore it can be concluded that It would be less effective if general indicators with the same level of priorities were used for evaluating and comparing all faculty members' workload.

It should, however, be pointed out that as Jordan (1994) states the mission or the goal of the faculty is another, important factor that should be considered when the indicators are to be weighted. The weight assigned to each indicator needs to reflect the mission of the institute as well. For example, in Iran, the main mission of medical schools is to educate GPs (Marandy 2001) and thus teaching medicine is in the top priority of all medical schools.

Faculty care more about the postgraduate students than the undergraduates. This is consistent with other studies (Layzell 1992). It should, however, be noted that the undergraduates are at the earlier stages of their studies and need more motivation and more contact with experts in the field. Thus it is recommended that they should not be deprived of good education.

While most studies indicate that instruction, research and managerial services are the major priorities, the present study suggests that instruction, research and then professional development are ranked as priorities. This might be because of the poor perception regarding managerial services and the importance given to professional development by Iranians.

The results suggest that noninstructional time is as important as instructional time and the amount of time and effort involved in teaching a three-credit course may be different from another three-credit course. Discipline and course level are important in evaluating faculty workload.

The list of indicators provided in the present article suggests that faculty workload should be measured based on very detailed and specific indicators. This not only will provide the basis for considering all aspects of the workload of a faculty member, but also will make the comparison between different faculties easier and more consistent.

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