A Model for Determining Faculty Workload in Schools of Nursing.

Ellienne Todd Tate

Louisiana State University and Agricultural & Mechanical College

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SCHOOLS OF NURSING.

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A MODEL FOR DETERMINING FACULTY WORKLOAD
IN SCHOOLS OF NURSING

A Dissertation
Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Education in the Department of Extension and International Education

by
Ellienne Todd Tate
B.S., Northwestern State University, 1962
M.S., University of Maryland, 1964
December, 1978
DEDICATION

This dissertation is dedicated to Polly Anne Bahm for her unselfish consideration and assistance to the author in achieving her goals, and to Bill and Walton for their sacrifices and love which made possible the completion of this study.
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The author expresses her grateful appreciation to the chairman of her graduate committee, Dr. Bruce Flint, for his guidance and inspiration throughout this study. The author is further appreciative of the assistance provided by Dr. Satish Verma and the members of her graduate committee: Dr. Forrest Deseran, Dr. Edward W. Gassie, Dr. Eugene McCann, and Dr. L. L. Pesson.

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ABSTRACT

The purpose of this study was to develop a model for determining faculty workload in schools of nursing. This purpose evolved from the need for a commonly accepted model and criteria for determining faculty workload that was identified from the personal experience of the writer and from a review of selected literature on faculty workload in higher education in general and nursing in particular.

A descriptive research design was used with a mailed questionnaire designed by the writer as the tool for the collection of data. The population was a random sample of 160 of the 283 baccalaureate schools of nursing accredited by the Council of Baccalaureate and Higher Degree Programs of the National League for Nursing. Thirty percent of the population returned useable questionnaires in time for inclusion in the study. The questionnaire was designed to illicit responses regarding the characteristics of the population and to determine the actual and preferred workload of the faculty in the selected schools of nursing.

No statistically significant relationship was found between the factors that the respondents considered
important in determining faculty workload and the actual contact hour and non-contact hour workload that was reported.

Credit hours were reported as being the primary criteria used to determine faculty workload and they were not found to be constant with total contact hours worked by the faculty. Further, a low faculty/student ratio with a high contact hour workload was reported.

Seventy-five percent of the respondents indicated that primary consideration for determining faculty workload should be contact hours as opposed to credit hours. The recommended ratio of faculty to students was 1:8 for clinical laboratory courses.

Based on the findings of this study and the review of literature, the following model for determining faculty workload was developed:
Model

1 contact class hour = 1 $TWH_c^{1}$

$$\frac{N_s^3 (N_{Lh})^4}{8} = TWH_{Lh}^{2}$$

$TWH_c + TWH_{Lh} = TWH^{5}$

12 to 14 TWH = 1 $FTW^{6}$

1Teacher workload hour for class contact time

2Teacher workload hour for laboratory contact time

3Number of students for laboratory

4Number of laboratory contact hours

5Teacher workload hours

6Full-time teacher workload
Chapter I

INTRODUCTION

Situation

The workload of faculty in higher education is generally recognized as the function of many variables, yet it is most often expressed in terms of credit hours. The credit hour variable measures student progress toward a degree, not faculty input (1, pp. 6-122). The numerous important other variables such as contact hours, number of preparations, faculty-student ratios, nature of the subject matter, and travel to laboratory sites are often ignored.

Nursing, as an applied discipline, necessitates the use of experiential learning in the preparation of the student for professional practice. Peterson points out that the use of real clinical settings as a teaching-learning laboratory is essential for the student in nursing to synthesize in patient care (3, p. 141).

Passos elucidates that there are numerous problems related to determining workload of faculty in nursing and that it is clearly the responsibility of the nurse faculty to determine workload standards through research (2, pp. 153-156).
Hence, numerous problems for determining faculty workload in nursing have been identified. Many of the problems, however, are not unique to the field. As Yuker points out, there are numerous studies which indicate that there are differences in time required by different disciplines (4, p. 37).

Statement of the Problem

The problem toward which this study was directed was the lack of a commonly accepted model and criteria for determining faculty workload in schools of nursing.

The need for a model to more appropriately qualify and quantify the effect of the numerous variables to determine faculty workload in nursing has been identified by the writer through personal experiences and through a search of literature in the area of faculty workload in general and faculty workload in nursing in particular.

Purpose and Objectives

The purpose of this study was to develop a model for determining faculty workload in schools of nursing.

The specific objectives of this study were as follows:

1. To describe faculty workloads in selected schools of nursing.
2. To identify the variables considered in determining faculty workload.

3. To compare the use of variables by different institutions in determining faculty workload using various statistical measures.

4. To develop a model for determining faculty workload.

Definition of Terms

Baccalaureate Schools of Nursing -- Schools of Nursing preparing persons for licensure as Registered Nurses through curricula leading to a Bachelor's Degree with a Nursing Major.

Faculty Workload -- The sum of all the activities of Faculty that is directly related or indirectly related to his professional responsibilities, duties, and interests.

Clinical laboratory -- Laboratory practice in a real health agency.

Credit Hours -- Number of semester or quarter hours assigned a course for official recording purposes.

Clock Hours -- Number of actual hours a week a class meets.

Contact Hours -- Number of actual hours a week that a faculty spends in direct contact with a student for the credit awarding purposes of a course or courses.
REFERENCES CITED


Chapter 2

REVIEW OF LITERATURE

The review of literature was focused on the development of a historical perspective, identification and description of the ingredients of faculty workload, and on the identification of problems and considerations in determining faculty workload. Specific emphasis was placed on nursing education in particular.

Overview

Until the last decade or two, educational administration has been notably laggard in attacking its problems by methods approximating the scientific. Tradition, sentiment, rules of thumb, temporizing, compromise—these have been and unfortunately, still are, the dominant methods in this important field of human enterprise. One of the largest of the problems is the administration of educational institutions is that of the proper method of determination of the working load of the members of the instructional staff.

The above quotation appeared in the first study of major significance on faculty workload published in 1919 (17, p. 5) and remains a landmark in this area of investigation (35). The 1919 study by Koos was directed toward determining answers to questions regarding the influence of various factors on teaching load. Many of the findings have been repeatedly confirmed, but some have not.
The interest in the concept of faculty workload has been reflected by an increasing number of studies having been conducted in the 1950's and continuing into the 1970's. In 1959, a conference on faculty workload was held at Purdue University and was sponsored by the Southern Regional Education Board, the Western Interstate Commission for Higher Education, the New England Board of Higher Education, and the Office of Statistical Information and Research of the American Council of Education. The proceedings of the conference were published in a monograph in 1960, edited by Kevin Bunnell. The inter-regional participation and approach to the problem of determining faculty workload at this conference provided educators with an opportunity to discuss a problem which is critical and clearly national in its implications (4).

In 1971, two important reports on faculty workload in higher education were published. The Lorents' (18) study describes results of a faculty activity analysis using a time sampling technique. The Romney (28) study describes the work of the National Center for Higher Education Management Systems by a Faculty Activity Analysis Task Force. In each of these studies and in others (5), (30), (14), (12), (18) and (28) the authors tended to develop their own list of purposes with some overlap. Yuker points out that such lists of purposes are not as helpful in studying faculty workload as would be in the discussion of
questions that can be answered (35, p. 6).

Several authors, such as Young (34), Trabue (32), Holliman (15), Eurich (8), Reynolds (27) and Hefferman (13) point out that there is a discrepancy in the use and development of criteria for determining faculty workload. In all of these studies, credit hours have been given strong consideration but have not proven to be a satisfactory single criterion for determining workload. Credit hours are not constant with total hours worked. The Inter-university Council of Ohio (22, p. 8) stated the problem in this way:

Clearly the conclusion of virtually all studies from 1929 to 1959 was that neither credit hour, contact hour, student credit hours, or student contact hours were by themselves, or together, reliable indicators of faculty members' workloads. Despite the results of these studies, the convenient descriptive load of fifteen credit hours per week (with an average to two hours preparation and grading for each credit hour taught), has persisted throughout higher education . . . . Junior colleges were pleased when they could, from registrar's records, show a fifteen hour load. Universities argued that twelve was a better number when research and public service were considered. The American Association of University Professors recently recommended that nine be adopted as being more realistic. In short, the use of "credit hour" as a standard criterion for evaluating an individual's contribution to the work of his university is even less appropriate now than it was ten years ago, and it was clearly inappropriate then.

In attempting to conceptualize faculty workload, many problems are identified. The first is the very definition of workload. The most prevalent definition in the literature is that it is the sum of all of the activi-
ties of the college or university teacher who is directly or indirectly related to his professional duties, responsibilities, and interests (6), (31) and (18).

Ingredients of a Workload

Some of the measures which have been applied to determine faculty load include credit hours taught, contact hours with students, student credit hour production per full-time equivalent faculty, and student/faculty ratio. Yuker contends that none of these measures have been shown to be valid measures of faculty workload (35, p. 12).

The credit hour system as a standard criterion for faculty workload became prevalent in the late nineteenth century. It was at that time viewed as a major break from classical, rigid curricula. The credit hour system was first applied quantitatively as one credit hour being assigned for one hour of exercise a week per semester in recitation, lab work or lecture (13, pp. 61-63).

By the early twentieth century, both educational and administrative functions were quantified in terms of the credit system. The credit hour system remains the most common measure of teaching loads in institutions of higher education, yet, it has not proven to be a reliable measure of teaching load. Knowles and White (16), Ayer (1) and Woodburne (33) illustrated that the ratio of total time
required to prepare and to teach a semester hour of credit ranged from two to eight hours. In the Woodburne study (33, p. 86), a fifteen credit hour load was equated with a sixty hour work week.

In addition to the historical use of credit hours as a measure of workload, class or contact hours and student credit hours have also been used. Yuker points out that the historical and continuing use of these measures is based on untenable assumptions (35, p. 10).

The National Education Association ranks contact hours as a measure of faculty workload second only to credit hours. According to NEA, the contact hours are somewhat better than credit hours as they reflect work time rather than the arbitrary time indicated by credit hours. The contact hours, however, share the faults of the credit hours (20).

The use of the contact hour is more satisfactory to faculty involved in laboratory courses because it supports the concept that the laboratory hour requires at least as much faculty input as a class hour (11, p. 6-123). Further, Goodwin points out that the contact hour is an operational concept with a wide range of planning and decision making applications as opposed to the operational significance of the credit hour as a bookkeeping device for recording student progress.
As a result of attempting to improve on credit hours and contact hours, the measure of student credit hours per full-time equivalent came into use. Durham supports the use of this measure as being efficient. It involves using student credit hours produced per full-time equivalent faculty member (7, p. 54).

The values of the use of the student credit hour per full-time faculty equivalent proposed by Durham may be viewed as including the replacement of no information with some information promoting an awareness of the essential pluralism existing, equipping faculty and administrators with materials to defend their qualitative roles. Further, to justify the additional expenditures and investment in higher education, faculty workload data can serve a most useful purpose (7, pp. 57-58).

In addition to the use of credit hours taught, contact hours with students and student credit hour production per full-time equivalent faculty, student-faculty ratio has also been applied as a measure of faculty workload as well as an indicator of institutional quality. This measure of faculty workload has little evidence to support its accuracy as is the case for the other measures when viewed alone. In 1959, Ruml and Morrison (29, p. 10) said:

The idea that the lower the over-all ratio of students to teachers, the better the quality of instruction is sheer fantasy, although widely believed. Even the assumption that the lower the ratio of student to teacher in particular subjects, the higher the quality of instruction has never been substantiated.
Problems and Considerations

Young, in discussing a report utilizing criteria developed from the measures most often used to determine faculty workload, pointed out that other factors needed to be considered. He emphasized that other factors needed to be considered particularly in the fields of music, nursing, teacher education, fine arts, physical education, business education and those special areas requiring supervision (34, p. 60).

Nursing as an applied discipline necessitates the use of experiential learning in the preparation of the student for practice in professional nursing. In the analysis of the role of the nurse educator, Fry proposes that there is much role strain with a diversity of activity and responsibility because the nurse educator is confronted with a variety of roles. These roles include consideration of students, hospital or health agency personnel, teams of health care providers and other faculty (9, p. 9). In nursing education, the faculty are dependent upon clinical sites as teaching-learning laboratories.

As Blee said, there is a need to express the relative emphasis of each major area of service within an institution while seeking at the same time to retain some sort of balance (3, p. 45). Durham (7, pp. 59-60) in discussing
faculty workload, quotes the following statements by Harry K. Newburn from his study of *Faculty Personnel Policies in State Universities* as published by Montana State University:

The teaching load should be established on a standard basis primarily as a guide to general practice. For example, in estimating the number of staff required, it might be assumed that the typical load is to be 12, 9, or 6 hours (4, 3, or 2 courses) depending on the institution. Immediately, however, it will be recognized that two types of deviations from this very general criterion must be practiced as follows:

1. Certain academic units, because of differences in the way they operate, may require a modified quantitative standard.

2. Teaching is only one part of the total load and must be recognized as such. In measuring staff load all elements involved in the professor's assignment must be equated. It should be expected, therefore, that the teaching load will vary upward or downward from the standard depending upon the intensity of the other approved activities being carried by the professor.

In 1970, the American Association of University Professors Committee on Teaching, Research and Publications stressed the point that no single formula for all of American higher education can be devised but that guidelines can be set forth. It was emphasized that means can be devised within each institution for those faculty whose responsibility does not fit the conventional lecture pattern, e.g., laboratory responsibility (2, pp. 30-31). The dimension of responsibility for patients/clients enters into the responsibility of the nurse faculty and becomes
a further measure of faculty workload.

Peterson points out that the use of real clinical settings as a teacher-learning laboratory is believed to be essential for the student in nursing to synthesize in patient care and that the merits of clinical education are unassailable. She further points out that the educational institutions are extremely dependent upon the clinical agencies for crucial aspects of their educational programs, yet the educational institutions have minimal control over this aspect of their activities (25, pp. 141 and 144). The factors affecting faculty workload as the result of the necessity for the use of outside agencies are broadened to include limitations on the number of students a faculty may assign at any given time and in any given place. Also, the additional factors of travel time to the agency in planning for an experience and in directing the experiences of the students add to the workload of the faculty.

In a study of faculty workload in nursing, Reynolds (27) found a low faculty-student ratio in clinical settings with a high resultant faculty load in contact hours. It has been demonstrated that in some clinical settings, such as the intensive care unit, a faculty-student ratio of 1 to 2 is the permissible maximum load to ensure effective clinical instruction (10).

A survey of faculty-student ratio in baccalaureate
schools of nursing in 1974 revealed that as enrollment increases, ratio tends to increase. The survey further indicates that as the classification of the student increases, the faculty-student ratio decreases (19, p. 453).

While the literature on faculty workload in nursing is limited, pertinent information regarding faculty-student ratio was published in 1964 by the U. S. Department of Health, Education, and Welfare. The report entitled *Nursing Education Facilities: Programing Considerations and Architectural Guide* (21, pp. 31-32) states:

> The nature of nursing practice and education is such that the faculty-student ratio is much lower than in curricula where the safety and well-being of people are not considerations.

> The location of the patient care areas, the need to utilize community resources to obtain student experience, and the need for close supervision of the student in patient care experiences are some of the factors which influence the faculty-student ratio.

> Additional faculty will be needed where members of the faculty are involved in curricular experimentation, community health project, or research.

This publication (21, p. 37) further reports:

> As a planning factor for undergraduate programs, it is recommended that at least a ratio of 1 faculty to 9 students be used. This ratio is not intended to indicate that within the patient care practice area that 1 faculty member will supervise 9 students at a time in patient care experiences. She may demonstrate nursing care to one student or a group of students as she may have two or more groups of students needing supervision.

> In a recent publication of educational issues
in nursing, Passos (24, p. 153) elucidates that a current myth in nursing is that "Clinical instruction of nursing students can be equated with laboratory sections of physical and biological sciences in establishing standards for faculty workloads." She further points out that this myth is the most dangerous of all those encountered by the nursing educator because it grossly oversimplifies the nature and complexity of nursing phenomena encountered in the presence of real people facing health related problems in clinical settings where discrete variables cannot be isolated and controlled as is the case in a simulated laboratory situation.

Passos presents five characteristics which differentiate clinical nursing laboratory sections from those laboratory sections of physical and biological sciences. The first she calls the "whole-part problem." This problem relates to the fact that the variables of concern to the learner cannot be isolated from the total response of the person or persons whose environment the student enters. The second characteristic is labeled "predictability of phenomena." Here she points out that predictability of phenomena in a nursing laboratory is difficult because many unidentified factors cannot be predicted. In a simulated laboratory, the student works with a limited number of factors which are generally known. This characteristic of unpredictability
is followed by what Passos calls "situational stability." This characteristic supports the concept of minimum control over the stability of a situation where the patient/client can have sudden changes in his response.

The fourth and fifth characteristics presented by Passos are "faculty-student ratio" and "faculty workload and the time cost of the clinical nursing laboratory." The faculty-student ratio, she points out, is related to the complexity of the clinical area and the responsibilities inherent as supported in the first three characteristics. In the fifth characteristic it is demonstrated that the widely used formula of three clock hours to one credit hour for clinical laboratory assumes that preparation for laboratory requires one-third the time as preparing for classroom activity and that this assumption is a gross deception.

Based upon the illustrations presented by Passos, she concludes that it is clearly the responsibility of the nurse faculty to develop workload standards through research. This is essential so that needed standards can be supported and comprehended by administrators in higher education (24, pp. 153-156).

In consideration of the role of faculty, Ozimek and Yura (23, p. 8) point out that in the calculation of faculty workload in nursing, a significant dimension to be considered is the number of students and clients for whom
the faculty member is responsible. The ratio of faculty to student is magnified and multiplied as responsibility of the faculty is extended to include clients. Where a faculty-student ratio in a clinical laboratory setting might be one to ten, if each student has two clients, then the ratio of faculty to human beings increases the ratio of responsibility to one faculty for thirty human beings.

While there are numerous problems peculiar to determining faculty workload in nursing, many of the problems are not unique to the field. Yuker (35, p. 37) illustrates that the assumption of equivalence of different disciplines is directly contradicted by many studies, although most institutional policies do not consider differences between subject fields as a component of determining faculty workload. He further cites numerous studies indicating differences in time required by different disciplines, thus implying that subject matter has an important influence on determining workload of faculty.

Conclusion

The necessity for measuring faculty workload and the complexity of doing so has been problematic for several years. In 1929, Reeves and Russell (26, P. 165) said:

The evaluation of faculty load is an extremely difficult problem. Teaching duties and other
professional duties vary tremendously from institution to institution and from individual to individual within a given institution. In fact, the factors involved in determining total faculty load are so numerous and so varied as almost to preclude precise determination by any mechanical method. 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.

The writer has identified through the review of selected literature, the need, problems and the considerations involved in determining faculty workload. While no thoroughly scientific method for determining faculty workload was evident, numerous considerations were reported.

The significance of the contact hour as a major consideration where laboratory courses were required was supported. The value of the contact hour as a more satisfactory measure of work and time than the use of the credit hour was evident.

The concept of modified quantitative standards for determining faculty workload in nursing due to the diversity of factors affecting faculty workload was demonstrated. The use of outside agencies for practice, travel time to agencies, and the responsibility for patients/clients in addition to students were reported in the diversity of factors. Also a low faculty-student ratio in clinical settings, where the safety and well-
being of people were considerations, was reported.

The writer further found that the need and responsibility for the development of faculty workload standards in nursing through research was considered an essential activity for faculty in nursing.

In the words of Abraham Lincoln, "If we first could know where we are, and whither we are tending, we could judge better what to do, and how to do it." Thus from the search of literature, the need to describe, analyze and further develop ways of qualifying faculty workload has not been adequately met. By describing "where we are" in determining workload of faculty in nursing, inferences can be drawn to determine "whither we are tending" and to "judge better what to do and how to do it."
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Chapter 3

METHODOLOGY

Research Procedure

A descriptive research design was used for this study and a questionnaire designed by the writer was the tool used for the collection of the data.

The problem toward which this study was directed was the lack of a commonly accepted model and criteria for determining faculty workload in schools of nursing.

The need for the study was identified from the personal experience of the writer and from a review of selected literature on faculty workload in higher education in general and nursing education in particular.

The purpose of the study was to develop a model for determining faculty workload in schools of nursing.

This chapter describes the scope, the sample selection and the methods used to collect and to analyze the data for this study.

Scope of Study

This study was conducted over a four-month period, June to September, 1978. The population for the study was a probability sample of 160 schools of the 283 baccalaureate
schools of nursing accredited by the Council of Baccalaureate and Higher Degree Programs of the National League for Nursing.

Sample Selection

The sample of 160 schools was randomly selected from among the 283 baccalaureate schools of nursing accredited by the Council of Baccalaureate and Higher Degree Programs of the National League for Nursing. Each member of the total population was assigned a number and 160 numbers were drawn from a container holding the numbers of the total population.

The sample population chosen included schools in different regions of the United States. The schools selected represented locations in 41 states, the District of Columbia, and Puerto Rico.

The total return of questionnaires was 65 (41 percent) with 48 (30 percent) included in the analysis of data for the purposes of this study. Ten schools (6 percent) returned their questionnaires beyond the return date deadline, and seven schools (4 percent) returned their questionnaires with no response. The questionnaires returned represented responses from schools from 33 states in different geographic regions of the United States.

Selltiz and others point out that when question-
naires are mailed to a random sample of the population, the return usually varies from about 10 to 50 percent (3, p. 297). The return of questionnaires from the random sample for this study was 30 percent.

The writer made the decision to proceed with the study with the 30 percent response as it was within the general range of returns reported in the literature. The breadth of the geographic regions of the United States represented by the respondents was 33 states which contributed to the decision. Further, the range in the size of the schools as indicated by the number of full-time faculty reported was considered relatively broad, with a range of 9 to 46 full-time faculty.

Data Collection Instrument

A questionnaire designed by the writer was used as the data collection instrument (Appendix B). The mail questionnaire was chosen as the tool for data collection as the population covered a large geographic area, 41 states, the District of Columbia and Puerto Rico, which precluded the use of alternative data collection methods. Further, the anonymity of the respondents was assured in the use of the questionnaire.

The questionnaire included requests for responses to 16 items, with three of the 16 items requiring open-ended responses. The information requested included
selected general characteristics of the schools, and identified factors related to actual and desired teaching loads, and teaching methods of the faculty for the 1977-78 academic year.

A letter requesting participation, identifying the purpose of the study and identifying the writer accompanied each questionnaire (Appendix A). The anonymity of the participants was assured and each questionnaire was numbered to facilitate tabulation and coding. A second letter, (Appendix C) was sent three weeks following the first mailing to encourage those who had not responded to do so.

A pretest of the questionnaire was done in June, 1978. Ten schools were randomly selected to participate. The participants were asked to complete the questionnaire and to offer comments and suggestions regarding its clarity and value. Seven (70 percent) of the schools responded. Based on the pretest, two questions were altered to promote clarity. All of the schools responding offered comments supportive of the need for the study.

Data Analyses

Data from each of the 48 respondents were tabulated and analyzed using various statistical methods for evaluation. Frequency and percentage distributions were done to analyze and present the characteristics of the selected population. The mean was computed to assess average
measures where appropriate.

Faculty workload was perceived as having two dimensions, namely time spent in actual teaching, lecture and laboratory, and time required for preparation, student evaluation and counseling. These dimensions were labelled as contact hour workload, and noncontact hour workload per full-time faculty member. The correlation of faculty workload with selected factors considered important to workload was determined by the Spearman rank order method.

The formula for the Spearman rank coefficient of correlation is expressed as follows:

$$p = 1 - \frac{6 \sum d^2}{N(N^2-1)}$$

The Spearman rank order method is a product-moment correlation of coefficient calculated for ordinal data. Ordinal data refers to data which has been sequenced or ranked and it does not reflect the shape of a population distribution. The coefficient $p$ indicates the extent of agreement between rank orders as opposed to the linear association that is measured by the Pearson method of correlation (2, p. 344).

The probability levels for the relationship of each of the variables considered were presented. No specific level of probability was chosen as the study did
not seek to accept or reject a hypotheses at any given level, but to determine whether or not the values of \( p \) were significantly different from 0.

Based on the review of selected literature and the analyses of data obtained by the questionnaire, conclusions and recommendations were made and a model for determining faculty workload was developed and presented.

**Summary**

The population for this study included 48 schools (30 percent) of the potential 160 respondents. The respondents represented schools located in 33 states of the potential 41 states plus the District of Columbia and Puerto Rico that were randomly selected for the sample population.

The information needed to complete this study was obtained from mailed questionnaires and from a review of pertinent literature.

The data were analyzed and presented using illustrations of frequency and percentage distributions and measures of central tendency. The Spearman rank coefficient of correlation was used to show the relationship of selected variables for determining faculty workload.

The analysis of data appears in Chapter 4 and the conclusions and recommendations appear in Chapter 5.
REFERENCES CITED


Chapter 4

PRESENTATION AND ANALYSIS OF DATA

Introduction

The data obtained from the questionnaire used in this study were evaluated using the statistical methods described in Chapter Three. The subsequent findings are presented in this chapter.

Forty-eight of the 160 schools which were surveyed, completed and returned their questionnaires in time for inclusion in the study, resulting in a 30 percent return of the sample population. Ten schools (6 percent) returned their questionnaires too late to be included in the study and seven schools (4 percent) returned their questionnaires with no responses. The total return of questionnaires was 65 (41 percent), with 48 (30 percent) included in the analysis of data for the purposes of this study.

Selected Characteristics of the Population

Table 1 on the following page shows that 54 percent of the schools received their major financial support from state funds with an additional six percent reporting that their only source of funding was through state support.
The 89 percent of schools that reported a Federal source of funding, ranging from minor to significant, identified the source as Capitation Grant Funds authorized under the Nurse Training Act.

**Table 1**

Sources of Funding for the Selected Schools of Nursing, United States, 1977-1978

<table>
<thead>
<tr>
<th>Sources of Funding</th>
<th>Only Source</th>
<th>Rating of Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N 1 %</td>
<td>N %</td>
</tr>
<tr>
<td>Federal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2</td>
<td>2 4</td>
</tr>
<tr>
<td>State</td>
<td>3 6</td>
<td>26 54</td>
</tr>
<tr>
<td>County</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2</td>
<td>47 98</td>
</tr>
<tr>
<td>City</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2</td>
<td>47 98</td>
</tr>
<tr>
<td>Private Religious</td>
<td>1 2</td>
<td>7 15</td>
</tr>
<tr>
<td>Private Non-Religious</td>
<td>1 2</td>
<td>3 6</td>
</tr>
<tr>
<td>Other Donations and</td>
<td>1 2</td>
<td>7 15</td>
</tr>
<tr>
<td>Foundations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\text{N} = \text{Number of respondents}\)
Table 2
Number of Semester Hours Required for a Bachelor's Degree in Selected Schools of Nursing, United States, 1977-1978

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Number Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>120-122</td>
<td>7</td>
</tr>
<tr>
<td>123-125</td>
<td>6</td>
</tr>
<tr>
<td>126-128</td>
<td>10</td>
</tr>
<tr>
<td>129-131</td>
<td>2</td>
</tr>
<tr>
<td>132-134</td>
<td>4</td>
</tr>
<tr>
<td>135-137</td>
<td>3</td>
</tr>
<tr>
<td>138-140</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

Table 3
Number of Quarter Hours Required for a Bachelor's Degree in Selected Schools of Nursing, United States, 1977-1978

<table>
<thead>
<tr>
<th>Quarter Hours</th>
<th>Number Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>180-184</td>
<td>2</td>
</tr>
<tr>
<td>185-189</td>
<td>3</td>
</tr>
<tr>
<td>190-194</td>
<td>3</td>
</tr>
<tr>
<td>195-199</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>
Tables 2 and 3 reveal that a total of 43 of the 48 respondents provided information as to the number of semester hours or quarter hours required by their institutions to earn the Bachelor's degree with a major in nursing. The majority of the schools responding indicated that they were on the semester hour system.

The mean of the semester hours reported was 127.42 and the range was from 120 semester hours to 140. The mean of the quarter hours reported was 189.10 and the range of the quarter hours was 180 to 198.

In terms of the length of the programs in academic semesters, 21 percent of the 48 respondents reported that they require one or two summer sessions in addition to the eight academic semesters generally required to earn the bachelor's degree in most academic areas.

Table 4

<table>
<thead>
<tr>
<th>Level of Admission</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>17</td>
<td>35</td>
</tr>
<tr>
<td>Sophomore</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>Junior</td>
<td>18</td>
<td>38</td>
</tr>
<tr>
<td>Senior</td>
<td>0</td>
<td>00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Table 4 illustrates that the admission of generic students to the nursing major for the population surveyed ranged from freshmen to junior levels. Thirty-eight percent of the schools admitted students at the upper division level, junior, and 63 percent of the schools admitted students at the lower division level, freshmen or sophomore.

The respondents indicated that they offer more courses in nursing at the upper division levels and that the enrollment in nursing courses is larger at that level. Table 5, on the following page, illustrates for each academic level, the mean number of courses, students, hours of class per week, and hours of clinical laboratory per week.
Table 5

Courses, Students, Hours of Class Per Week, and Clinical Laboratory Hours Per Week for Selected Schools of Nursing, United States, 1977-78

<table>
<thead>
<tr>
<th>Classification of Students, and Number Responding</th>
<th>Mean Number of Nursing Courses</th>
<th>Mean Student Enrollment</th>
<th>Mean Number Class Work</th>
<th>Mean Number Laboratory Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen N=9</td>
<td>.27</td>
<td>24</td>
<td>.44</td>
<td>.50</td>
</tr>
<tr>
<td>Sophomore N=30</td>
<td>1.63</td>
<td>118</td>
<td>2.29</td>
<td>4.88</td>
</tr>
<tr>
<td>Junior N=41</td>
<td>4.36</td>
<td>275</td>
<td>5.31</td>
<td>13.79</td>
</tr>
<tr>
<td>Senior N=42</td>
<td>3.96</td>
<td>244</td>
<td>4.69</td>
<td>14.04</td>
</tr>
</tbody>
</table>

The size of the faculty in the study population ranged from nine to 47 full-time faculty equivalents with a mean number of 26.77 faculty. The median number of faculty was 24 and the mode was 20 faculty.

Teaching Load and Teaching Methods

Seventy-seven percent of the population provided responses regarding the most characteristic teaching load in hours per full-time faculty per semester or quarter. These are reported in Tables 6 and 7.
### Table 6
Number and Percentage of Semester Hours Teaching Load Per Full-time Faculty in Selected Schools of Nursing, United States, 1977-1978

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-4</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>5-6</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>7-8</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>9-10</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>11-12</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>13-14</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>15-16</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>N=29</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### Table 7
Number and Percentage of Quarter Hours Per Teaching Load Per Full-time Faculty in Selected Schools of Nursing, United States, 1977-1978

<table>
<thead>
<tr>
<th>Quarter Hours</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-5</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>6-7</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>8-9</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>10-11</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>12-13</td>
<td>3</td>
<td>37.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>N=8</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
The mean teaching load per full-time faculty was 9.48 semester hours. The mean per full-time faculty for the respondents reporting quarter hour load was 8.87 quarter hours.

Eighty-five percent of the 48 schools responded to the question regarding the use of a team teaching approach and whether each faculty member on the team got credited with the same number of hours and the same students. Sixty-one percent responded that they did team-teach and that the faculty were each credited for the same hours and students. Thirty-nine percent reported team-teaching and responded that the faculty did not get credited for the same hours and students.

The mean number of hours that was reported for the activities of the faculty on a weekly basis appear in Table 8.
Table 8

Number of Hours Spent Per Faculty Per Week in Contact Hours and Non-Contact Hour Workload Activities for Selected Schools of Nursing United States, 1977-1978

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mean Number of Hours</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contact Hour Load</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Laboratory</td>
<td>14.26</td>
<td>46</td>
</tr>
<tr>
<td>Lecture/Theory</td>
<td>3.76</td>
<td>46</td>
</tr>
<tr>
<td><strong>Non-Contact Hour Load</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning/Evaluation</td>
<td>7.35</td>
<td>44</td>
</tr>
<tr>
<td>Counseling</td>
<td>3.61</td>
<td>44</td>
</tr>
<tr>
<td>Research</td>
<td>2.03</td>
<td>30</td>
</tr>
<tr>
<td>Committee Assignments</td>
<td>2.73</td>
<td>46</td>
</tr>
<tr>
<td>Other - Preparing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assignments for lab., travel</td>
<td>3.60</td>
<td>20</td>
</tr>
<tr>
<td>time to agencies, professional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>activities, and community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>service</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The faculty/student ratios for clinical laboratory activity are shown in Table 9. The mean ratios of faculty and students are presented as they were reported in terms of actual practices and preferred practices. In addition, 10 percent of the population reported that the ratio is sometimes less as some clinical areas require smaller ratios. They reported restrictions in the clinical areas of intensive care, newborn nursery, and post partum. Fifty-two percent of the respondents indicated that clinical agencies
place restrictions on the number of students that their faculty can assign to patients/clients in their agency at any one time.

### Table 9

<table>
<thead>
<tr>
<th>Level of Student</th>
<th>Number of Respondents</th>
<th>Actual Mean Ratio Faculty/Student</th>
<th>Preferred Mean Ratio Faculty/Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>N=6</td>
<td>1:10</td>
<td>1:10</td>
</tr>
<tr>
<td>Sophomore</td>
<td>N=28</td>
<td>1:11</td>
<td>1:9</td>
</tr>
<tr>
<td>Junior</td>
<td>N=48</td>
<td>1:9</td>
<td>1:8</td>
</tr>
<tr>
<td>Senior</td>
<td>N=48</td>
<td>1:9</td>
<td>1:8</td>
</tr>
</tbody>
</table>

The participants were requested to indicate their use of direct supervision by faculty of students in the clinical areas and the use of indirect supervision. Direct supervision referred to faculty being present in the clinical area with the students and indirect supervision referred to faculty being on call, but not in the clinical area with the students at all times. Ninety percent of the respondents reported the use of direct supervision most of the time for students at all levels. Sixty-four percent reported the use of indirect supervision occasionally for students at the junior or senior levels. Three schools
reported the use of preceptors in the clinical agency for student supervision and the use of faculty to check on an on call or periodic basis.

Factors for Determining Workload

The participants were requested to rate eleven factors in terms of their importance for determining faculty workload in their institution. The following four classifications were used to indicate the significance of each factor: very important, fairly important, slightly important, and not important. The tabulation of these responses using a weighted mean is shown in Table 10.
### Table 10
Rating of Importance of Selected Factors Used in Determining Faculty Workload in Selected Schools of Nursing, United States, 1977-1978

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rating&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact hour load</td>
<td>3.69</td>
</tr>
<tr>
<td>Number of Students enrolled in class</td>
<td>3.59</td>
</tr>
<tr>
<td>Credit hour load</td>
<td>3.33</td>
</tr>
<tr>
<td>Number of Patients/clients faculty and students responsible for in clinical</td>
<td>3.17</td>
</tr>
<tr>
<td>Number of different courses taught</td>
<td>3.06</td>
</tr>
<tr>
<td>Professional improvement</td>
<td>2.85</td>
</tr>
<tr>
<td>Committee assignments</td>
<td>2.72</td>
</tr>
<tr>
<td>Amount of paper work, e.g., nursing care plans, student evaluations</td>
<td>2.72</td>
</tr>
<tr>
<td>Time to plan learning experiences in clinical agencies</td>
<td>2.66</td>
</tr>
<tr>
<td>Research</td>
<td>2.47</td>
</tr>
<tr>
<td>Travel time to clinical agencies by faculty</td>
<td>2.06</td>
</tr>
</tbody>
</table>

<sup>1</sup>Rating Scales
4=Very Important; 3=Fairly Important; 2=Slightly Important; 1=Not Important
The contact hour variable was reported as being the most important of the independent variables listed for determining faculty workload with a mean of 3.69. The number of students was second in importance with a mean of 3.59 and credit hour was third with a mean of 3.33.

The variables listed were considered independent variables because they were the factors which were used to determine faculty workload. The contact hours are the sum of the class and laboratory hours spent by the faculty with students, and the non-contact hours are the sum of all of the other hours that faculty spent per week in activities related to their performance of their duties as a faculty. These hours, the contact and non-contact workload hours, were the criterion or dependent variables. These dependent variables were determined by and varied according to the independent variables presented in Table 10.

The Spearman rank coefficient of correlation was used to measure the degree of relationship of the dependent and independent variables. Tables 11 and 12 show the correlation values and the probability of prediction levels of the variables that were measured.
Table 11

Correlation of Selected Independent Variables with Contact Hour Workload in Selected Schools of Nursing United States, 1977-1978

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Correlation</th>
<th>Level of Probability</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of different courses taught</td>
<td>-0.282</td>
<td>0.320</td>
<td>45</td>
</tr>
<tr>
<td>Contact hour load</td>
<td>-0.224</td>
<td>0.135</td>
<td>46</td>
</tr>
<tr>
<td>Committee assignments</td>
<td>-0.220</td>
<td>0.147</td>
<td>45</td>
</tr>
<tr>
<td>Credit hour load</td>
<td>-0.216</td>
<td>0.162</td>
<td>44</td>
</tr>
<tr>
<td>Time to plan learning experiences in clinical agencies</td>
<td>-0.153</td>
<td>0.320</td>
<td>45</td>
</tr>
<tr>
<td>Amount of paper work, e.g., nursing care plans and student evaluations</td>
<td>-0.083</td>
<td>0.586</td>
<td>45</td>
</tr>
<tr>
<td>Number of students enrolled in class</td>
<td>0.083</td>
<td>0.586</td>
<td>45</td>
</tr>
<tr>
<td>Professional improvement</td>
<td>-0.055</td>
<td>0.719</td>
<td>45</td>
</tr>
<tr>
<td>Number of patients/clients, faculty and students responsible for in clinical areas</td>
<td>-0.039</td>
<td>0.800</td>
<td>45</td>
</tr>
<tr>
<td>Research</td>
<td>0.015</td>
<td>0.920</td>
<td>44</td>
</tr>
<tr>
<td>Travel time to clinical agencies by faculty</td>
<td>-0.014</td>
<td>0.930</td>
<td>45</td>
</tr>
<tr>
<td>Independent variables by rank and correlation</td>
<td>Correlation</td>
<td>Level of Probability</td>
<td>Number of Respondents</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------</td>
<td>----------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Time to plan learning experiences in clinical agencies</td>
<td>0.134</td>
<td>0.479</td>
<td>29</td>
</tr>
<tr>
<td>Number of students enrolled in class</td>
<td>0.125</td>
<td>0.518</td>
<td>29</td>
</tr>
<tr>
<td>Professional improvement</td>
<td>-0.123</td>
<td>0.524</td>
<td>29</td>
</tr>
<tr>
<td>Travel time to clinical agencies by faculty</td>
<td>-0.109</td>
<td>0.570</td>
<td>29</td>
</tr>
<tr>
<td>Committee assignments</td>
<td>0.107</td>
<td>0.582</td>
<td>29</td>
</tr>
<tr>
<td>Number of patients/clients, faculty and students responsible for in clinical areas</td>
<td>0.093</td>
<td>0.630</td>
<td>29</td>
</tr>
<tr>
<td>Credit hour load</td>
<td>0.076</td>
<td>0.694</td>
<td>29</td>
</tr>
<tr>
<td>Number of different courses taught</td>
<td>-0.074</td>
<td>0.707</td>
<td>28</td>
</tr>
<tr>
<td>Research</td>
<td>0.072</td>
<td>0.716</td>
<td>28</td>
</tr>
<tr>
<td>Contact hour load</td>
<td>-0.040</td>
<td>0.831</td>
<td>30</td>
</tr>
<tr>
<td>Amount of paper work, nursing care plans, student evaluations</td>
<td>0.024</td>
<td>0.901</td>
<td>29</td>
</tr>
</tbody>
</table>
Tables 11 and 12 show the levels of correlation and probability for the independent and dependent variables. The coefficients of correlation are conventionally defined to take the values of +1 in the presence of a perfect positive relationship and -1 in the presence of a perfect negative relationship. The value of 0 indicates that the variables may be independent of each other (1, p. 217).

As illustrated in Tables 11 and 12, all of the population did not respond to each item; therefore, missing values are reflected in the differences in the number of observations for each variable. The values for correlation are nearer to 0 correlation at each rank than they are to a +1 or -1. McCollough states (2, p. 344) that this kind of finding may indicate that the variables are independent of each other or that they are related by a nonmonotonic function.

The coefficient levels were higher in the relationship of the independent variables to contact hour load than they were in relationship to non-contact hour load. This could be due in part to the fact that there were missing values in the responses to non-contact hour workload. In each analysis, there appeared to be a low level of significance of relationship and a low level of the probability of predicting one variable by the other.
Tables 11 and 12 point out that some variables appeared to be more highly related than others, although no relationships were found to be significantly monotonic.

The participants were asked to indicate whether or not they had a formula for determining faculty workload. Forty-four percent indicated that they did and 56 percent responded that they did not. Seventy-six percent of those who indicated they did, reported their method for determining faculty workload. Thirty-one percent of the 16 reported that full-time faculty workload was 12 credit hours per semester. Nineteen percent reported that full time was 12 weighted teacher units. One weighted teacher unit equals one classroom hour and two weighted teacher units equals three laboratory hours. The remaining 50 percent who responded indicated the use of similar weighted items such as one credit hour equals one factor and one laboratory hour equals 7/8 of a factor with the factors totaling 12 to 14 points for a full-time faculty equivalent workload.

The study participants were requested to recommend a formula for determining faculty workload in nursing. Seventy-five percent of the respondents indicated that primary consideration should be given to contact hours with recommendations for the number of hours ranging from 10 to 16 with a mean of 12. Sixty-three percent of the
respondents recommend that the ratio of faculty to students in the clinical laboratory should be a consideration with a recommended range of faculty/student ratios from 1:4 to 1:10 with a mean of 1:8.
REFERENCES CITED


Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Purpose of Study

The purpose of this study was to develop a model for determining faculty workload in schools of nursing. This purpose evolved from the need for a commonly accepted model and criteria to determine faculty workload that was identified from the personal experience of the writer and from a review of selected literature on faculty workload in higher education in general and in nursing in particular.

Objectives of the Study

The specific objectives of this study were:

1. To describe faculty workloads in selected schools of nursing.
2. To identify the variables considered in determining faculty workload.
3. To compare the use of variables by different institutions in determining faculty workload by using various statistical measures.
4. To develop a model for determining faculty workload.
Findings

Forty-eight of the 160 schools surveyed and returned their questionnaires in time for inclusion in this study. The 48 schools participating represented responses from schools in 33 different states.

The majority of the schools, 54 percent, indicated that they received their major financial support from state funds. An additional six percent reported that their only source of funding was through state support. Eighty-nine percent of the schools reported the receipt of Federal funds, Capitation Grant Funds, through the Nurse Training Act as a minor to significant source of funding.

Seventy-seven percent of the respondents indicated that they functioned on a semester hour basis and 23 percent reported the use of the quarter hour system. The mean number of semester hours required for a bachelor's degree for the 33 schools reporting the use of the semester hour system was 127.42. The mean was 189.10 quarter hours for the 10 schools reporting the use of the quarter hour system.

The majority of the schools, 63 percent, admitted students at the lower division level, freshmen or sophomore. The mean number of nursing courses was higher at the junior and senior levels than at the freshmen and sophomore levels.
The mean number of nursing courses at the junior level was 4.36, as compared to a mean number of .27 at the freshmen level, and a mean number of 1.63 at the sophomore level.

The size of the faculty in the schools surveyed ranged from nine to 47 full-time faculty equivalents. The mean number of faculty per school was 26.77.

The mean teaching load per full-time faculty was reported as being 9.48 semester hours. For the respondents reporting the use of the quarter hour system, the mean load reported was 8.87 quarter hours per full-time faculty.

Sixty-one percent of the respondents reported the use of a team teaching approach with each faculty receiving credit in their workload for the same hours and students. Thirty-nine percent reported the use of the team teaching approach without each receiving credit for the same hours and students.

The mean number of contact hours reported was 18.02. This was broken down to indicate a mean of 14.26 hours reported for clinical laboratory time and a mean of 3.76 hours for lecture/theory time per week. The non-contact hour workload mean was 19.22 hours per week.

The range of actual and preferred faculty/student ratios were from 1.8 to 1.11, depending on the level of the student. The actual mean ratio at the freshmen level was 1:10, at the sophomore level 1:11, and at the junior
and senior levels the mean ratios were 1:9. Fifty-two percent of the population indicated that clinical agencies place restrictions on the number of students that faculty can assign to patients/clients in their agency at any one time.

Ninety percent of the respondents reported direct supervision of students by faculty in the clinical laboratory areas most of the time. Sixty-four percent reported the use of indirect supervision of students by faculty on an occasional basis at the junior and senior levels.

The respondents rated the importance of the use of 11 selected variables for determining faculty workload in their institution. On a four point scale, the highest mean was 3.69 for the variable of "contact hour load," 3.59 for "number of students enrolled in class," 3.33 for credit hour load," and 3.17 for the "number of patients/clients that faculty and students were responsible for in the clinical areas." The remaining variables had a mean rating of 2.06 to 3.06.

Using the Spearman rank coefficient of correlation, the 11 variables that were rated in terms of importance for determining faculty workload were compared with the actual workloads reported in contact hour and non-contact hour activities. The levels of significance were all
relatively low, being nearer to 0 than to +1 or -1 for each relationship analyzed. No statistically significant relationship was found using this analysis.

Forty-four percent of the population reported that they had a method for determining faculty workload. Seventy-six percent of the 21 respondents reported their method. Thirty-one percent of the 16 respondents indicated that a full-time faculty workload was 12 credit hours per semester. Nineteen percent of the 16 respondents reported that the full-time load per faculty was 12 weighted teacher units, with one weighted teacher unit being equal to one classroom hour and two weighted teacher units being equal to three laboratory hours. The remaining 50 percent who responded indicated the use of similar weighted items such as one credit hour equals one factor and one laboratory hour equals 7/8 of a factor with 12 to 14 factors being equal to a full-time faculty workload.

In recommending a formula for determining faculty workload, 75 percent of the responses were that contact hours should be given primary consideration. The total contact hours recommended ranged from 10 to 16 hours. The mean was 12 hours. Sixty-three percent recommended that the ratio of faculty to students should be considered. The range recommended was from one faculty per four students, to one faculty per 10 students, with a mean of one faculty
Conclusions

The following conclusions represent the author's interpretation of the findings which were considered to be relative to the specific objectives of the study:

1. Credit hours are the primary criteria used to report faculty workload and they were not found to be constant with total contact hours worked by faculty in the schools of nursing participating in this study.

2. Faculty of the selected population had a high contact hour workload and a low credit hour workload.

3. The amount of credit applied for laboratory teaching is less quantity-wise than was true when the credit hour system was applied as a standard criterion in the late nineteenth century with a one to one relationship of credit hour to laboratory hour.

4. The use of the contact hour was considered more satisfactory than the credit hour for determining faculty workload when laboratory courses were involved.

5. The concept of the contact hour as an operational concept with a wide range of planning
and decision-making applications appears more relevant to determining faculty workload than credit hours.

6. There is role strain and diversity of activity of faculty in schools of nursing due to a variety of role confrontations.

7. Certain academic units require a modified quantitative standard to determine workload because of the way they operate.

8. There is a low faculty/student ratio with a high contact hour load in schools of nursing.

9. No commonly accepted model or procedure exists for determining faculty workload and the workload varies considerably among schools of nursing.
Recommendations

Faculty Workload Model

Based on the review of literature and the findings of the study, the following model is proposed as a means of determining faculty workload in schools of nursing:

\[ \frac{N_s^3 (N_{Lh})^4}{8} = TWH_{Lh}^2 \]

\[ TWH_c + TWH_{Lh} = TWH^5 \]

\[ 12 \text{ to } 14 \text{ TWH} = 1 \cdot FTW^6 \]

1. Teacher workload hour for class contact time
2. Teacher workload hour for laboratory contact time
3. Number of students for laboratory
4. Number of laboratory contact hours
5. Teacher workload hours
6. Full-time teacher workload

The model presented was based on the significance that the study population placed on contact hours as being the most important consideration for determining faculty workload. Seventy-five percent of the respondents stated that contact hours were most important. The review
of literature was also supportive of the emphasis placed on contact hour load when laboratory courses were involved.

The recommendation of eight as the denominator in the equation for determining teacher workload hours of laboratory took into consideration the suggestion of the study population which was a recommended range of one faculty per four students to one faculty per 10 students, with a mean of one faculty per eight students. The findings of the study indicated that the actual mean of practice for the study population ranged from ratios of faculty to students of 1:8 to 1:11, with a preferred mean of 1:8 recommended for the junior and senior levels of courses. These are the levels where laboratory courses for the study population were concentrated as opposed to the freshmen and sophomore levels.

Goodwin stated that the contact hour is more satisfactory to faculty involved in laboratory courses because it supports the concept that the laboratory hour requires at least as much faculty input as a class hour (1, p. 6-123). NEA pointed out that contact hours are somewhat better than credit hours as they reflect work time rather than arbitrary time indicated by credit hours (2).

Several studies cited in the review of literature for this study indicated that credit hours have not been
found to be constant with total hours worked. The findings of this study supported this statement. The mean number of credit hours was 9.48 for those faculty on the semester hour system and 8.87 for those on the quarter hour system, yet the mean number of contact hours was 18.02 hours per week.

A 1964 publication on nursing education pointed out that faculty-student ratios are lower in curricula, such as nursing, where the safety and well being of people are significant considerations (3, p. 31-32).

The model proposed provides an opportunity for consideration of the role diversity of faculty as a particular school can develop other equivalents for the TWH based on their own interinstitutional analysis of need and activity.

**Other Recommendations**

The following general recommendations are made for future consideration:

1. That this study be replicated with a larger population to either negate or support the findings of this study as being characteristic of the total population.

2. That the model be validated by application, evaluation, and additional research in schools of nursing.
REFERENCES CITED


SELECTED BIBLIOGRAPHY

Books


Periodicals


Eurich, Alvin C. "Maintaining and Improving the Quality of Instruction." Journal of Higher Education, May, 1956, pp. 239-244.


Simmons, J. D. "What is a Full-Time Equivalent (FTE) Faculty Unit?" College and University, 46, Fall, 1970, pp. 33-36.


Young, William. "Six Criteria Form a Composite Profile Chart of Faculty Load." College and University Business, 36, April, 1964, pp. 59-60.

ERIE DOCUMENTS


Government Documents


Other Documents

Ohio, Interuniversity Council of. Faculty Load Study. Columbus, 1970.


Dear Colleague:

Will you please find time to fill out and return to me the enclosed questionnaire by September 22, 1978?

At the present, I am the Director of the School of Nursing at Southeastern Louisiana University at Hammond, and am engaged in research at Louisiana State University in partial fulfillment of the requirements for the degree of Doctor of Education. The purpose of the enclosed questionnaire, therefore, is to gather data for use in describing faculty workloads in schools of nursing and for developing a model for determining workload.

Deans or Chairpersons of selected baccalaureate schools of nursing that are accredited by the National League for Nursing are being requested to participate. No individual nor program will be identified in the study and the questionnaires are numbered for coding purposes only.

The stamped return envelope is for your convenience, and may I assure you of my appreciation of your time and assistance. A summary of the findings will be shared with you if you so indicate in your reply.

Sincerely,

/s/ Ellienne T. Tate
Mrs. Ellienne T. Tate

ETT:pab

Enclosures—Questionnaire
Return envelope
APPENDIX B

QUESTIONNAIRE

PURPOSE: Survey of Faculty Workload in Selected Baccalaureate Schools of Nursing for the 1977-1978 academic year.

I. Teaching Loads and Teaching Methods.

1. What was the number of Nurse Faculty in your school for the 1977-1978 academic session?
   No. of Full-Time Faculty _______ No. of Part-time Faculty _______
   Total number of Full-time Faculty Equivalents __________________________

2.a. What was the most characteristic teaching load per full-time faculty equivalent per semester hours or quarter hours for the 1977-1978 academic session?
   Semester Hours ______ or Quarter Hours ______
   b. If team teaching approach used, does each faculty get credited for the same students and hours? Yes ______ or No ______

3. What is the most characteristic number of hours that the faculty spends per week in each of the activities listed below:
   No. Hours in clinical laboratory ______________________
   No. Hours in lecture/theory ____________________________
   No. Hours in planning/evaluation time __________________
   No. Hours counseling students _________________________
   No. Hours research ____________________________________
   No. Hours committee assignments _______________________
   No. Hours other assignments (Please list) ________________

4. Teaching load of faculty. In the following Table, please provide information that is most characteristic of the activity of your faculty for the 1977-1978 academic year.

<table>
<thead>
<tr>
<th>NURSING COURSE NUMBER OR TITLE</th>
<th>LOWEST CLASS LEVEL</th>
<th>TOTAL ENROLLMENT</th>
<th>TYPE OF SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g.: Nursing 101</td>
<td>(1)</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>(Fr., Soph)</td>
<td>(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Jr., Sr.)</td>
<td>(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(all sections)</td>
<td>(5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Indicate the most characteristic faculty/student ratio in clinical laboratory courses for the 1977-1978 academic session for each level of the curriculum that applies: (If actual equal preferred, write same.)

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>ACTUAL RATIO</th>
<th>PREFERRED RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Faculty</td>
<td>No. of Students</td>
<td>No. of Faculty</td>
</tr>
<tr>
<td>Freshmen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Is the specification of numbers of students allowed by the clinical agencies a factor in determining the faculty/student laboratory ratio?
   Yes____________________ No_______________

7. If you answered "yes" to Number 6, please explain how this factor affects faculty/student ratio.

8. Do you have a formula for determining faculty teaching load?
   Yes________________ No_______________

9. If you answered "yes" to number 8, please provide the formula.

10. If you had the opportunity to propose a formula for determining teaching load, what would you recommend?

11. How important are the following items for determining faculty workload in your institution?

<table>
<thead>
<tr>
<th>Item</th>
<th>Very Important</th>
<th>Fairly Important</th>
<th>Slightly Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number of students enrolled in class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Amount of paper work, e.g., nursing care plans, student evaluations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Number of patient/clients for whom faculty and students are responsible in clinical agencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Travel time to clinical agencies for faculty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Time to plan learning experiences in clinical agency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Number of different courses taught</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Committee assignments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Professional improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Credit hour load</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Contact hour load</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Are there any other factors which are considered in determining load in your institution? If so, please list and rate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. For each of the clinical laboratory teaching methods listed below, check the response which best describes the use of the method by your faculty at each level that applies.

<table>
<thead>
<tr>
<th>METHOD</th>
<th>MOST OF THE TIME</th>
<th>OCCASIONALLY</th>
<th>SELDOM or NEVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct supervision of students by faculty (Faculty in clinical areas with stu.)</td>
<td>Freshmen Sophomore Junior Senior</td>
<td>Freshmen Sophomore Junior Senior</td>
<td>Freshmen Sophomore Junior Senior</td>
</tr>
<tr>
<td>2. Indirect supervision (For on call, but not in clinical area)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Students assigned functions in clinical area as opposed to patients/clients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Patient/client assignments for individual students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Multiple or team assignments. Stu. assigned in teams for same patients/clients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. If there are other methods which you use, list &amp; rank that use</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. How many semester or quarter hours are required to earn the bachelor's degree with a nursing major from your institution?

- No. Semester Hours _____ or No. Quarter hours _____

14. At what level do you admit generic students to the nursing major in your institution? (Please check)
   - Freshmen _____
   - Sophomore _____
   - Junior _____
   - Senior _____

15. Indicate the length of your program in terms of academic semesters or quarters. (Respond to all that apply.)
   - No. Academic Sem. _____ or No. Quarter Sess. _____
   - No. Summer Sessions, if on academic semester calendar _____

16. To what extent do you receive funding from each of the following sources? (Check all that apply.)

<table>
<thead>
<tr>
<th>Source</th>
<th>Only Source</th>
<th>Major Significant Source</th>
<th>Minor Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>County</td>
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<td></td>
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<tr>
<td>City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private, Religious</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private, Non-religious</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Please specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THANK YOU for taking time to respond to this questionnaire. Please check the space provided if you would like to receive a summary of the findings of this study.

- YES _____
Dear Colleague:

On August 28th a request was sent to you asking your assistance in completing a QUESTIONNAIRE for use in describing faculty workloads in Baccalaureate Schools of Nursing. It was requested that the questionnaire be returned to me by September 22nd in the stamped envelope which was also forwarded to you.

This correspondence is to request you to please forward the completed QUESTIONNAIRE to me if you have not already done so.

May I again assure you of my appreciation for your participation in this endeavor.

Sincerely,

/s/ Ellienne T. Tate

Mrs. Ellienne T. Tate

ETT:pab
V I T A

NAME: Ellienne Nell Todd Tate

PERMANENT ADDRESS: Route 4, Box 158
                    Hammond, Louisiana 70401

DEGREE AND DATE TO BE CONFERRED: Doctor of Education,
                                 December, 1978

DATE OF BIRTH: September 30, 1940

PLACE OF BIRTH: Lake Charles, Louisiana

PARENTS: Donald W. and Marie Young Todd

HUSBAND: W. O. Tate, Jr.

CHILD: Walton Todd Tate

SECONDARY EDUCATION: Bell City High School, 1958

COLLEGIATE INSTITUTIONS ATTENDED: DEGREE DATE OF DEGREE

  Northwestern State University  B. S.  1962
  University of Maryland         M. S.  1964
  Louisiana State University     Ed. D. 1978

POSITIONS HELD:

  Staff Nurse, Lake Charles Memorial Hospital, 1962-1963

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  Assistant Professor, School of Nursing, Southeastern Louisiana University, 1967 to 1970

  Associate Professor and Director, School of Nursing, Southeastern Louisiana University, 1970 to present

PROFESSIONAL FRATERNAL MEMBERSHIPS:
  Kappa Gamma Delta
  Sigma Theta Tau
EXAMINATION AND THESIS REPORT

Candidate: Ellienne Todd Tate

Major Field: Extension Education

Title of Thesis: A Model for Determining Faculty Workload in Schools of Nursing

Approved:

[Signatures]

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Q. McCann

J. Aller

T. E. Kemblay

Edward W. Passier

Date of Examination:

November 15, 1978